

CRF Errors Corrected by the STIC Systems Branch

Serial Number: 08/206,176

CRF Processing Date: 3/23/94
 Edited by: [Signature]
 Verified by: [Signature] (STIC staff)

ENTERED

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: _____
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: _____
- ☐ Inserted a space between the last nucleic designator and the nucleic number for sequences: _____
- ☐ Deleted page numbers in the text of the sequence listing, which is considered invalid text.
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: _____
- ☒ Inserted a nucleic number at the end of a nucleic line. SEQ ID NO's edited: Sequence 27
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: _____
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: _____
- ☐ Deleted non-ASCII "garbage" at the end of files, and other invalid text, such as a secretary's initials.
- ☐ Inserted mandatory headings, specifically: _____
- ☐ Corrected an obvious error in the response, specifically: _____
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: _____
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Other: _____

***Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.**

8/01/93

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/206,176DATE: 03/23/94
TIME: 15:00:21

INPUT SET: S2548.raw

SEQUENCE LISTING

(1) General Information:

(i) APPLICANT: Garner, Ian
Dalrymple, Michael A
Prunkard, Donna E
Foster, Donald C

ENTERED

(ii) TITLE OF INVENTION: Production of Fibrinogen in Transgenic
Animals

(iii) NUMBER OF SEQUENCES: 27

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: ZymoGenetics, Inc.
(B) STREET: 4225 Roosevelt Way, N.E.
(C) CITY: Seattle
(D) STATE: WA
(E) COUNTRY: USA
(F) ZIP: 98105

(v) COMPUTER READABLE FORM:
(A) MEDIUM TYPE: Floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: PatentIn Release #1.0, Version #1.25

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER:
(B) FILING DATE:
(C) CLASSIFICATION:

(viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: Parker, Gary E
(B) REGISTRATION NUMBER: 31-648
(C) REFERENCE/DOCKET NUMBER: 93-15

(ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: 206-547-8080 ext 322
(B) TELEFAX: 206-548-2329

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 5943 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/206,176DATE: 03/23/94
TIME: 15:00:27

INPUT SET: S2548.raw

52
53 (ii) MOLECULE TYPE: DNA (genomic)
54
55
56 (vii) IMMEDIATE SOURCE:
57 (B) CLONE: Human Fibrinogen A-alpha chain
58
59 (ix) FEATURE:
60 (A) NAME/KEY: CDS
61 (B) LOCATION: join(31..84, 1154..1279, 1739..1922, 3055..3200,
62 3786..5210)
63
64
65 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:
66
67 GTCTAGGAGC CAGCCCCACC CTTAGAAAAG ATG TTT TCC ATG AGG ATC GTC TGC 54
68 Met Phe Ser Met Arg Ile Val Cys
69 1 5
70
71 CTA GTT CTA AGT GTG GTG GGC ACA GCA TGG GTATGGCCCT TTTCATTTTT 104
72 Leu Val Leu Ser Val Val Gly Thr Ala Trp
73 10 15
74
75 TCTTCTTGCT TTCTCTCTGG TGTATTATCC ACAAAGAGCC TGGAGGTCAG AGTCTACCTG 164
76
77 CTCTATGTCC TGACACACTC TTAGCTTTAT GACCCAGGC CTGGGAGGAA ATTCCTGGG 224
78
79 TGGGCTTGAC ACCTCAAGAA TACAGGGTAA TATGACACCA AGAGGAAGAT CTTAGATGGA 284
80
81 TGAGAGTGTA CAACTACAAG GGAAACTTTA GCATCTGTCA TTCAGTCTTA CCACATTTTG 344
82
83 TTTTGTTTTG TTTTAAAAAG GGCAAGAATT ATTTGCCATC CTTGTACCTA TAAAGCCTTG 404
84
85 GTGCATTATA ATGCTAGTTA ATGGAATAAA ACATTTTATG GTAAGATTG TTTTCTTTAG 464
86
87 TTATTAATTT CTTGCTACTT GTCCATAATA AGCAGAACTT TTAGTGTTAG TACAGTTTTG 524
88
89 CTGAAAGGTT ATTGTTGTGT TTGTCAAGAC AGAAGAAAAA GCAAACGAAT TATCTTTGGA 584
90
91 AATATCTTTG CAGTATCAGA AGAGATTAGT TAGTAAGGCA ATACGCTTTT CCGCAGTAAT 644
92
93 GGTATTCTTT TAAATTATGA ATCCATCTCT AAAGGTTACA TAGAACTTG AAGGAGAGAG 704
94
95 GAACATTGAG TTAAGATAGT CTAGGTTTTT CTACTGAAGC AGCAATTACA GGAGAAAGAG 764
96
97 CTCTACAGTA GTTTTCAACT TTCTGTCTGC AGTCATTAGT AAAAATGAAA AGGTAAAATT 824
98
99 TAACTGATTT TATAGATTCA AATAATTTTC CTTTTAGGAT GGATTCTTTA AAACCTCTAA 884
100
101 TATTTATCAA ATGCTTATTT AAGTGTGACA CACAGTTAAG AAATTTGTAC ACCTTGTCCTC 944
102

RAW SEQUENCE LISTING PATENT APPLICATION US/08/206,176

DATE: 03/23/94
TIME: 15:00:32

INPUT SET: S2548.raw

103	CTTTAATTCT CATAACAACCT CCATAAAATG GGTCTAGGA TTTCCATTTG AAGATAAGAA	1004
104		
105	ACCTGAAGCT TGCCGAAGCC CTGTGTCTGC TCTCCTTAAT CTCTGTGAGA GTGCCATCTC	1064
106		
107	TTCCTGGGGA CTTGTAGGCA TGCCACTGTC TCCTCTTCTG GCTAACATTG CTGTTGCTCT	1124
108		
109	CTTTTGTGTA TGTGAATGAA TCTTTAAAG ACT GCA GAT AGT GGT GAA GGT GAC	1177
110	Thr Ala Asp Ser Gly Glu Gly Asp	
111	20 25	
112		
113	TTT CTA GCT GAA GGA GGA GGC GTG CGT GGC CCA AGG GTT GTG GAA AGA	1225
114	Phe Leu Ala Glu Gly Gly Gly Val Arg Gly Pro Arg Val Val Glu Arg	
115	30 35 40	
116		
117	CAT CAA TCT GCC TGC AAA GAT TCA GAC TGG CCC TTC TGC TCT GAT GAA	1273
118	His Gln Ser Ala Cys Lys Asp Ser Asp Trp Pro Phe Cys Ser Asp Glu	
119	45 50 55	
120		
121	GAC TGG GTAAGCAGTC AGCGGGGGAA GCAGGAGATT CCTTCCCTCT GATGCTAGAG	1329
122	Asp Trp	
123	60	
124		
125	GGGCTCACAG GCTGACCTGA TTGGTCCCAG AAACCTTTTTT AAATAGAAAA TAATTGAATA	1389
126		
127	GTTACCTACA TAGCAAATAA AGAAAAGGAA CCTACTCCCA AGAGCACTGT TTATTTACCT	1449
128		
129	CCCCAACTCT GGATCATTAG TGGGTGAACA GACAGGATTT CAGTTGCATG CTCAGGCAAA	1509
130		
131	ACCAGGCTCC TGAGTATTGT GGCCTCAATT TCCTGGCACC TATTTATGGC TAAGTGGACC	1569
132		
133	CTCATTCAG AGTTTCTCTG CGACCTCTAA CTAGTCCTCT TACCTACTTT TAAGCCAACT	1629
134		
135	TATCTGGAAG AGAAAGGGTA GGAAGAAATG GGGGCTGCAT GGAAACATGC AAAATTATTC	1689
136		
137	TGAATCTGAG AGATAGATCC TTAAGTGAAT TTTCTCCCTT CACTTTCAG AAC TAC	1744
138	Asn Tyr	
139		
140		
141	AAA TGC CCT TCT GGC TGC AGG ATG AAA GGG TTG ATT GAT GAA GTC AAT	1792
142	Lys Cys Pro Ser Gly Cys Arg Met Lys Gly Leu Ile Asp Glu Val Asn	
143	65 70 75	
144		
145	CAA GAT TTT ACA AAC AGA ATA AAT AAG CTC AAA AAT TCA CTA TTT GAA	1840
146	Gln Asp Phe Thr Asn Arg Ile Asn Lys Leu Lys Asn Ser Leu Phe Glu	
147	80 85 90	
148		
149	TAT CAG AAG AAC AAT AAG GAT TCT CAT TCG TTG ACC ACT AAT ATA ATG	1888
150	Tyr Gln Lys Asn Asn Lys Asp Ser His Ser Leu Thr Thr Asn Ile Met	
151	95 100 105 110	
152		
153	GAA ATT TTG AGA GGC GAT TTT TCC TCA GCC AAT A GTAAGTATTA	1932

RAW SEQUENCE LISTING PATENT APPLICATION US/08/206,176

DATE: 03/23/94
TIME: 15:00:38

INPUT SET: S2548.raw

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154  Glu Ile Leu Arg Gly Asp Phe Ser Ser Ala Asn
155                115                120
156
157  CATATTTACT TCTTTGACTT TATAACAGAA ACAACAAAA TCCTAAATAA ATATGATATC      1992
158
159  CGCTTATATC TATGACAATT TCATCCCCAA GTACTTAGTG TAGAAACACA TACCTTCATA      2052
160
161  ATATCCCTGA AAATTTTAAG AGGGAGCTTT TGTTTTTCGTT ATTTTTTCAA AGTAAAAGAT      2112
162
163  GTTAACTGAG ATTGTTTAAG GTCACAAAAT AAGTCAGAAT TTTGGATTAA AACAAGAATT      2172
164
165  TAAATGTGTT CTTTTCAACA GTATATACTG AAAGTAGGAT GGGTCAGACT CTTTGAGTTG      2232
166
167  ATATTTTTGT TTCTGCTTTG TAAAGGTGAA AACTGAGAGG TCAAGGAACT TGTTCAAAGA      2292
168
169  CACAGAGCTG GGAATTCAAC TCCCAGACTC CACTGAGCTG ATTAGGTAGA TTTTAAATT      2352
170
171  TAAAATATAG GGTCAAGCTA CGTCATTCTC ACAGTCTACT CATTAGGGTT AGGAAACATT      2412
172
173  GCATTCACTC TGGGCATGGA CAGCGAGTCT AGGGAGTCCT CAGTTTCTCA AGTTTTGCTT      2472
174
175  TGCCTTTTTA CACCTTCACA AACACTTGAC ATTTAAAATC AGTGATGCCA AACTAGCTG      2532
176
177  GCAAGTGAGT GATCCTGTTG ACCCAAAACA GCTTAGGAAC CATTTCAAAT CTATAGAGTT      2592
178
179  AAAAAGAAAA GCTCATCAGT AAGAAAATCC AATATGTTCA AGTCCCTTGA TTAAGGATGT      2652
180
181  TATAAAATAA TTGAAATGCA ATCAAACCAA CTATTTTAAC TCCAAATTAC ACCTTTAAAA      2712
182
183  TTCCAAAGAA AGTTCTTCTT CTATATTTCT TTGGGATTAC TAATTGCTAT TAGGACATCT      2772
184
185  TAACTGGCAT TCATGGAAGG CTGCAGGGCA TAACATTATC CAAAAGTCAA ATGCCCCATA      2832
186
187  GGTTTTGAAC TCACAGATTA AACTGTAACC AAAATAAAAT TAGGCATATT TACAAGCTAG      2892
188
189  TTTCTTTCTT TCTTTTTTCT CTTTCTTTCT TTCTTTCTTT CTTTCTTTCT TTCTTTCTTT      2952
190
191  CTTTCTTTCT TTCTCCTTCC TTCCTTTCTT CCTTTCTTTT TTGCTGGCAA TTACAGACAA      3012
192
193  ATCACTCAGC AGCTACTTCA ATAACCATAT TTTCGATTTC AG  AC CGT GAT AAT      3065
194                Asn Arg Asp Asn
195                125
196
197  ACC TAC AAC CGA GTG TCA GAG GAT CTG AGA AGC AGA ATT GAA GTC CTG      3113
198  Thr Tyr Asn Arg Val Ser Glu Asp Leu Arg Ser Arg Ile Glu Val Leu
199                130                135                140
200
201  AAG CGC AAA GTC ATA GAA AAA GTA CAG CAT ATC CAG CTT CTG CAG AAA      3161
202  Lys Arg Lys Val Ile Glu Lys Val Gln His Ile Gln Leu Leu Gln Lys
203                145                150                155
204

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RAW SEQUENCE LISTING PATENT APPLICATION US/08/206,176

DATE: 03/23/94
TIME: 15:00:43

INPUT SET: S2548.raw

205	AAT GTT AGA GCT CAG TTG GTT GAT ATG AAA CGA CTG GAG GTAAGTATGT	3210
206	Asn Val Arg Ala Gln Leu Val Asp Met Lys Arg Leu Glu	
207	160 165 170	
208		
209	GGCTGTGGTC CCGAGTGTCC TTGTTTTTGA GTAGAGGGAA AAGGAAGGCG ATAGTTATGC	3270
210		
211	ACTGAGTGTC TACTATATGC AGAGAAAAGT GTTATATCCA TCATCTACCT AAAAGTAGGT	3330
212		
213	ATTATTTTCC TCACTCCACA GTTGAAGAAA AAAAAATTCA GAGATATTAA GTAAATTTTC	3390
214		
215	CAACGTACAT AGATAGTAAT TCAAAGCAAT GTTCAGTCCC TGTCTATTCC AAGCCATTAC	3450
216		
217	ATCACCACAC CTCTGAGCCC TCAGCCTGAG TTCACCAAGG ATCATTTAAT TAGCGTTTCC	3510
218		
219	TTTGAGAGGG AATAGCACCT TACTCTTGAT CCATTCTGAG GCTAAGATGA ATTAAACAGC	3570
220		
221	ATCCATTGCT TATCCTGGCT AGCCCTGCAA TACCCAACAT CTCTTCCACT GAGGGTGCTC	3630
222		
223	GATAGGCAGA AAACAGAGAA TATTAAGTGG TAGGTCTCCG AGTCAAAAAA AATGAAACCA	3690
224		
225	GTTTCCAGAA GGAAAATTAA CTACCAGGAA CTCAATAGAC GTAGTTTATG TATTTGTATC	3750
226		
227	TACATTTTCT CTTTATTTTT CTCCCCTCTC TCTAG GTG GAC ATT GAT ATT AAG	3803
228	Val Asp Ile Asp Ile Lys	
229	175	
230		
231	ATC CGA TCT TGT CGA GGG TCA TGC AGT AGG GCT TTA GCT CGT GAA GTA	3851
232	Ile Arg Ser Cys Arg Gly Ser Cys Ser Arg Ala Leu Ala Arg Glu Val	
233	180 185 190	
234		
235	GAT CTG AAG GAC TAT GAA GAT CAG CAG AAG CAA CTT GAA CAG GTC ATT	3899
236	Asp Leu Lys Asp Tyr Glu Asp Gln Gln Lys Gln Leu Glu Gln Val Ile	
237	195 200 205	
238		
239	GCC AAA GAC TTA CTT CCC TCT AGA GAT AGG CAA CAC TTA CCA CTG ATA	3947
240	Ala Lys Asp Leu Leu Pro Ser Arg Asp Arg Gln His Leu Pro Leu Ile	
241	210 215 220	
242		
243	AAA ATG AAA CCA GTT CCA GAC TTG GTT CCC GGA AAT TTT AAG AGC CAG	3995
244	Lys Met Lys Pro Val Pro Asp Leu Val Pro Gly Asn Phe Lys Ser Gln	
245	225 230 235 240	
246		
247	CTT CAG AAG GTA CCC CCA GAG TGG AAG GCA TTA ACA GAC ATG CCG CAG	4043
248	Leu Gln Lys Val Pro Pro Glu Trp Lys Ala Leu Thr Asp Met Pro Gln	
249	245 250 255	
250		
251	ATG AGA ATG GAG TTA GAG AGA CCT GGT GGA AAT GAG ATT ACT CGA GGA	4091
252	Met Arg Met Glu Leu Glu Arg Pro Gly Gly Asn Glu Ile Thr Arg Gly	
253	260 265 270	
254		
255	GGC TCC ACC TCT TAT GGA ACC GGA TCA GAG ACG GAA AGC CCC AGG AAC	4139

RAW SEQUENCE LISTING PATENT APPLICATION US/08/206,176

DATE: 03/23/94
TIME: 15:00:48

INPUT SET: S2548.raw

256	Gly Ser Thr Ser Tyr Gly Thr Gly Ser Glu Thr Glu Ser Pro Arg Asn	
257	275 280 285	
258		
259	CCT AGC AGT GCT GGA AGC TGG AAC TCT GGG AGC TCT GGA CCT GGA AGT	4187
260	Pro Ser Ser Ala Gly Ser Trp Asn Ser Gly Ser Ser Gly Pro Gly Ser	
261	290 295 300	
262		
263	ACT GGA AAC CGA AAC CCT GGG AGC TCT GGG ACT GGA GGG ACT GCA ACC	4235
264	Thr Gly Asn Arg Asn Pro Gly Ser Ser Gly Thr Gly Gly Thr Ala Thr	
265	305 310 315 320	
266		
267	TGG AAA CCT GGG AGC TCT GGA CCT GGA AGT GCT GGA AGC TGG AAC TCT	4283
268	Trp Lys Pro Gly Ser Ser Gly Pro Gly Ser Ala Gly Ser Trp Asn Ser	
269	325 330 335	
270		
271	GGG AGC TCT GGA ACT GGA AGT ACT GGA AAC CAA AAC CCT GGG AGC CCT	4331
272	Gly Ser Ser Gly Thr Gly Ser Thr Gly Asn Gln Asn Pro Gly Ser Pro	
273	340 345 350	
274		
275	AGA CCT GGT AGT ACC GGA ACC TGG AAT CCT GGC AGC TCT GAA CGC GGA	4379
276	Arg Pro Gly Ser Thr Gly Thr Trp Asn Pro Gly Ser Ser Glu Arg Gly	
277	355 360 365	
278		
279	AGT GCT GGG CAC TGG ACC TCT GAG AGC TCT GTA TCT GGT AGT ACT GGA	4427
280	Ser Ala Gly His Trp Thr Ser Glu Ser Ser Val Ser Gly Ser Thr Gly	
281	370 375 380	
282		
283	CAA TGG CAC TCT GAA TCT GGA AGT TTT AGG CCA GAT AGC CCA GGC TCT	4475
284	Gln Trp His Ser Glu Ser Gly Ser Phe Arg Pro Asp Ser Pro Gly Ser	
285	385 390 395 400	
286		
287	GGG AAC GCG AGG CCT AAC AAC CCA GAC TGG GGC ACA TTT GAA GAG GTG	4523
288	Gly Asn Ala Arg Pro Asn Asn Pro Asp Trp Gly Thr Phe Glu Glu Val	
289	405 410 415	
290		
291	TCA GGA AAT GTA AGT CCA GGG ACA AGG AGA GAG TAC CAC ACA GAA AAA	4571
292	Ser Gly Asn Val Ser Pro Gly Thr Arg Arg Glu Tyr His Thr Glu Lys	
293	420 425 430	
294		
295	CTG GTC ACT TCT AAA GGA GAT AAA GAG CTC AGG ACT GGT AAA GAG AAG	4619
296	Leu Val Thr Ser Lys Gly Asp Lys Glu Leu Arg Thr Gly Lys Glu Lys	
297	435 440 445	
298		
299	GTC ACC TCT GGT AGC ACA ACC ACC ACG CGT CGT TCA TGC TCT AAA ACC	4667
300	Val Thr Ser Gly Ser Thr Thr Thr Thr Arg Arg Ser Cys Ser Lys Thr	
301	450 455 460	
302		
303	GTT ACT AAG ACT GTT ATT GGT CCT GAT GGT CAC AAA GAA GTT ACC AAA	4715
304	Val Thr Lys Thr Val Ile Gly Pro Asp Gly His Lys Glu Val Thr Lys	
305	465 470 475 480	
306		

RAW SEQUENCE LISTING PATENT APPLICATION US/08/206,176

DATE: 03/23/94
TIME: 15:00:53

INPUT SET: S2548.raw

307	GAA GTG GTG ACC TCC GAA GAT GGT TCT GAC TGT CCC GAG GCA ATG GAT	4763
308	Glu Val Val Thr Ser Glu Asp Gly Ser Asp Cys Pro Glu Ala Met Asp	
309	485 490 495	
310		
311	TTA GGC ACA TTG TCT GGC ATA GGT ACT CTG GAT GGG TTC CGC CAT AGG	4811
312	Leu Gly Thr Leu Ser Gly Ile Gly Thr Leu Asp Gly Phe Arg His Arg	
313	500 505 510	
314		
315	CAC CCT GAT GAA GCT GCC TTC TTC GAC ACT GCC TCA ACT GGA AAA ACA	4859
316	His Pro Asp Glu Ala Ala Phe Phe Asp Thr Ala Ser Thr Gly Lys Thr	
317	515 520 525	
318		
319	TTC CCA GGT TTC TTC TCA CCT ATG TTA GGA GAG TTT GTC AGT GAG ACT	4907
320	Phe Pro Gly Phe Phe Ser Pro Met Leu Gly Glu Phe Val Ser Glu Thr	
321	530 535 540	
322		
323	GAG TCT AGG GGC TCA GAA TCT GGC ATC TTC ACA AAT ACA AAG GAA TCC	4955
324	Glu Ser Arg Gly Ser Glu Ser Gly Ile Phe Thr Asn Thr Lys Glu Ser	
325	545 550 555 560	
326		
327	AGT TCT CAT CAC CCT GGG ATA GCT GAA TTC CCT TCC CGT GGT AAA TCT	5003
328	Ser Ser His His Pro Gly Ile Ala Glu Phe Pro Ser Arg Gly Lys Ser	
329	565 570 575	
330		
331	TCA AGT TAC AGC AAA CAA TTT ACT AGT AGC ACG AGT TAC AAC AGA GGA	5051
332	Ser Ser Tyr Ser Lys Gln Phe Thr Ser Ser Thr Ser Tyr Asn Arg Gly	
333	580 585 590	
334		
335	GAC TCC ACA TTT GAA AGC AAG AGC TAT AAA ATG GCA GAT GAG GCC GGA	5099
336	Asp Ser Thr Phe Glu Ser Lys Ser Tyr Lys Met Ala Asp Glu Ala Gly	
337	595 600 605	
338		
339	AGT GAA GCC GAT CAT GAA GGA ACA CAT AGC ACC AAG AGA GGC CAT GCT	5147
340	Ser Glu Ala Asp His Glu Gly Thr His Ser Thr Lys Arg Gly His Ala	
341	610 615 620	
342		
343	AAA TCT CGC CCT GTC AGA GGT ATC CAC ACT TCT CCT TTG GGG AAG CCT	5195
344	Lys Ser Arg Pro Val Arg Gly Ile His Thr Ser Pro Leu Gly Lys Pro	
345	625 630 635 640	
346		
347	TCC CTG TCC CCC TAGACTAAGT TAAATATTTT TGCACAGTGT TCCCATGGCC	5247
348	Ser Leu Ser Pro	
349	645	
350		
351	CCTTGCAATTT CTTTCTTAAC TCTCTGTTAC ACGTCATTGA AACTACACTT TTTTGGTCTG	5307
352		
353	TTTTTGTGCT AGACTGTAAG TTCCTTGGGG GCAGGGCCTT TGTCTGTCTC ATCTCTGTAT	5367
354		
355	TCCCAAATGC CTAACAGTAC AGAGCCATGA CTCAATAAAT ACATGTTAAA TGGATGAATG	5427
356		
357	AATTCCTCTG AAACCTCTATT TGAGCTTATT TAGTCAAATT CTTTCACTAT TCAAAGTGTG	5487

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/206,176DATE: 03/23/94
TIME: 15:00:59

INPUT SET: S2548.raw

358
359 TGCTATTAGA ATTGTCACCC AACTGATTAA TCACATTTTT AGTATGTGTC TCAGTTGACA 5547
360
361 TTTAGGTCAG GCTAAATACA AGTTGTGTTA GTATTAAGTG AGCTTAGCTA CCTGTACTGG 5607
362
363 TTTACTTGCTA TTAGTTTGTG CAAGTAAAAT TCCAAATACA TTTGAGGAAA ATCCCCCTTTG 5667
364
365 CAATTTGTAG GTATAAATAA CCGCTTATTT GCATAAGTTC TATCCCCTG TAAGTGCATC 5727
366
367 CTTTCCCTAT GGAGGGAAGG AAAGGAGGAA GAAAGAAAGG AAGGGAAAGA AACAGTATTT 5787
368
369 GCCTTATTTA ATCTGAGCCG TGCCTATCTT TGTAAGTTA AATGAGAATA ACTTCTTCCA 5847
370
371 ACCAGCTTAA TTTTTTTTTT AGACTGTGAT GATGTCCTCC AAACACATCC TTCAGGTACC 5907
372
373 CAAAGTGGCA TTTTCAATAT CAAGCTATCC GGATCC 5943
374
375

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 644 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

386
387 Met Phe Ser Met Arg Ile Val Cys Leu Val Leu Ser Val Val Gly Thr
388 1 5 10 15
389
390 Ala Trp Thr Ala Asp Ser Gly Glu Gly Asp Phe Leu Ala Glu Gly Gly
391 20 25 30
392
393 Gly Val Arg Gly Pro Arg Val Val Glu Arg His Gln Ser Ala Cys Lys
394 35 40 45
395
396 Asp Ser Asp Trp Pro Phe Cys Ser Asp Glu Asp Trp Asn Tyr Lys Cys
397 50 55 60
398
399 Pro Ser Gly Cys Arg Met Lys Gly Leu Ile Asp Glu Val Asn Gln Asp
400 65 70 75 80
401
402 Phe Thr Asn Arg Ile Asn Lys Leu Lys Asn Ser Leu Phe Glu Tyr Gln
403 85 90 95
404
405 Lys Asn Asn Lys Asp Ser His Ser Leu Thr Thr Asn Ile Met Glu Ile
406 100 105 110
407
408 Leu Arg Gly Asp Phe Ser Ser Ala Asn Asn Arg Asp Asn Thr Tyr Asn

RAW SEQUENCE LISTING PATENT APPLICATION US/08/206,176

DATE: 03/23/94
TIME: 15:01:04

INPUT SET: S2548.raw

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409          115          120          125
410
411 Arg Val Ser Glu Asp Leu Arg Ser Arg Ile Glu Val Leu Lys Arg Lys
412      130          135          140
413
414 Val Ile Glu Lys Val Gln His Ile Gln Leu Leu Gln Lys Asn Val Arg
415  145          150          155          160
416
417 Ala Gln Leu Val Asp Met Lys Arg Leu Glu Val Asp Ile Asp Ile Lys
418      165          170          175
419
420 Ile Arg Ser Cys Arg Gly Ser Cys Ser Arg Ala Leu Ala Arg Glu Val
421      180          185          190
422
423 Asp Leu Lys Asp Tyr Glu Asp Gln Gln Lys Gln Leu Glu Gln Val Ile
424      195          200          205
425
426 Ala Lys Asp Leu Leu Pro Ser Arg Asp Arg Gln His Leu Pro Leu Ile
427      210          215          220
428
429 Lys Met Lys Pro Val Pro Asp Leu Val Pro Gly Asn Phe Lys Ser Gln
430  225          230          235          240
431
432 Leu Gln Lys Val Pro Pro Glu Trp Lys Ala Leu Thr Asp Met Pro Gln
433      245          250          255
434
435 Met Arg Met Glu Leu Glu Arg Pro Gly Gly Asn Glu Ile Thr Arg Gly
436      260          265          270
437
438 Gly Ser Thr Ser Tyr Gly Thr Gly Ser Glu Thr Glu Ser Pro Arg Asn
439      275          280          285
440
441 Pro Ser Ser Ala Gly Ser Trp Asn Ser Gly Ser Ser Gly Pro Gly Ser
442      290          295          300
443
444 Thr Gly Asn Arg Asn Pro Gly Ser Ser Gly Thr Gly Gly Thr Ala Thr
445  305          310          315          320
446
447 Trp Lys Pro Gly Ser Ser Gly Pro Gly Ser Ala Gly Ser Trp Asn Ser
448      325          330          335
449
450 Gly Ser Ser Gly Thr Gly Ser Thr Gly Asn Gln Asn Pro Gly Ser Pro
451      340          345          350
452
453 Arg Pro Gly Ser Thr Gly Thr Trp Asn Pro Gly Ser Ser Glu Arg Gly
454      355          360          365
455
456 Ser Ala Gly His Trp Thr Ser Glu Ser Ser Val Ser Gly Ser Thr Gly
457      370          375          380
458
459 Gln Trp His Ser Glu Ser Gly Ser Phe Arg Pro Asp Ser Pro Gly Ser

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RAW SEQUENCE LISTING PATENT APPLICATION *US/08/206,176*

DATE: 03/23/94
TIME: 15:01:09

INPUT SET: *S2548.raw*

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460      385              390              395              400
461
462      Gly Asn Ala Arg Pro Asn Asn Pro Asp Trp Gly Thr Phe Glu Glu Val
463              405              410              415
464
465      Ser Gly Asn Val Ser Pro Gly Thr Arg Arg Glu Tyr His Thr Glu Lys
466              420              425              430
467
468      Leu Val Thr Ser Lys Gly Asp Lys Glu Leu Arg Thr Gly Lys Glu Lys
469              435              440              445
470
471      Val Thr Ser Gly Ser Thr Thr Thr Thr Arg Arg Ser Cys Ser Lys Thr
472              450              455              460
473
474      Val Thr Lys Thr Val Ile Gly Pro Asp Gly His Lys Glu Val Thr Lys
475      465              470              475              480
476
477      Glu Val Val Thr Ser Glu Asp Gly Ser Asp Cys Pro Glu Ala Met Asp
478              485              490              495
479
480      Leu Gly Thr Leu Ser Gly Ile Gly Thr Leu Asp Gly Phe Arg His Arg
481              500              505              510
482
483      His Pro Asp Glu Ala Ala Phe Phe Asp Thr Ala Ser Thr Gly Lys Thr
484              515              520              525
485
486      Phe Pro Gly Phe Phe Ser Pro Met Leu Gly Glu Phe Val Ser Glu Thr
487              530              535              540
488
489      Glu Ser Arg Gly Ser Glu Ser Gly Ile Phe Thr Asn Thr Lys Glu Ser
490      545              550              555              560
491
492      Ser Ser His His Pro Gly Ile Ala Glu Phe Pro Ser Arg Gly Lys Ser
493              565              570              575
494
495      Ser Ser Tyr Ser Lys Gln Phe Thr Ser Ser Thr Ser Tyr Asn Arg Gly
496              580              585              590
497
498      Asp Ser Thr Phe Glu Ser Lys Ser Tyr Lys Met Ala Asp Glu Ala Gly
499              595              600              605
500
501      Ser Glu Ala Asp His Glu Gly Thr His Ser Thr Lys Arg Gly His Ala
502              610              615              620
503
504      Lys Ser Arg Pro Val Arg Gly Ile His Thr Ser Pro Leu Gly Lys Pro
505      625              630              635              640
506
507      Ser Leu Ser Pro
508
509
510      (2) INFORMATION FOR SEQ ID NO:3:

```

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/206,176DATE: 03/23/94
TIME: 15:01:15

INPUT SET: S2548.raw

511
512 (i) SEQUENCE CHARACTERISTICS:
513 (A) LENGTH: 8878 base pairs
514 (B) TYPE: nucleic acid
515 (C) STRANDEDNESS: double
516 (D) TOPOLOGY: linear
517
518 (ii) MOLECULE TYPE: DNA (genomic)
519
520
521 (vii) IMMEDIATE SOURCE:
522 (B) CLONE: human fibrinogen B-beta chain
523
524 (ix) FEATURE:
525 (A) NAME/KEY: misc_RNA
526 (B) LOCATION: 1..469
527
528 (ix) FEATURE:
529 (A) NAME/KEY: exon
530 (B) LOCATION: 470..583
531
532 (ix) FEATURE:
533 (A) NAME/KEY: intron
534 (B) LOCATION: 584..3257
535
536 (ix) FEATURE:
537 (A) NAME/KEY: exon
538 (B) LOCATION: 3258..3449
539
540 (ix) FEATURE:
541 (A) NAME/KEY: intron
542 (B) LOCATION: 3450..3938
543
544 (ix) FEATURE:
545 (A) NAME/KEY: exon
546 (B) LOCATION: 3939..4122
547
548 (ix) FEATURE:
549 (A) NAME/KEY: intron
550 (B) LOCATION: 4123..5042
551
552 (ix) FEATURE:
553 (A) NAME/KEY: exon
554 (B) LOCATION: 5043..5270
555
556 (ix) FEATURE:
557 (A) NAME/KEY: intron
558 (B) LOCATION: 5271..5830
559
560 (ix) FEATURE:
561 (A) NAME/KEY: exon

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/206,176DATE: 03/23/94
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562 (B) LOCATION: 5831..5944
563
564 (ix) FEATURE:
565 (A) NAME/KEY: intron
566 (B) LOCATION: 5945..6632
567
568 (ix) FEATURE:
569 (A) NAME/KEY: exon
570 (B) LOCATION: 6633..6758
571
572 (ix) FEATURE:
573 (A) NAME/KEY: intron
574 (B) LOCATION: 6759..6966
575
576 (ix) FEATURE:
577 (A) NAME/KEY: exon
578 (B) LOCATION: 6967..7252
579
580 (ix) FEATURE:
581 (A) NAME/KEY: intron
582 (B) LOCATION: 7253..7870
583
584
585 (ix) FEATURE:
586 (A) NAME/KEY: exon
587 (B) LOCATION: 7871..8102
588
589 (ix) FEATURE:
590 (A) NAME/KEY: 3'UTR
591 (B) LOCATION: 8103..8537
592
593 (ix) FEATURE:
594 (A) NAME/KEY: misc_RNA
595 (B) LOCATION: 8538..8878
596
597 (ix) FEATURE:
598 (A) NAME/KEY: CDS
599 (B) LOCATION: join(470..583, 3258..3449, 3939..4122, 5043..5270,
600 5831..5944, 6633..6758, 6967..7252, 7871..8102)
601
602
603 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:
604
605 GAATTCATGC CCCTTTTGAA ATAGACTTAT GTCATTGTCA GAAAACATAA GCATTTATGG 60
606
607 TATATCATTA ATGAGTCACG ATTTTAGTGG TTGCCTTGTG AGTAGGTCAA ATTTACTAAG 120
608
609 CTTAGATTTG TTTTCTCACA TATTCTTTTCG GAGCTTGTGT AGTTTCCACA TTAATTTACC 180
610
611 AGAAACAAGA TACACACTCT CTTTGAGGAG TGCCCTAACT TCCCATCATT TTGTCCAATT 240
612

RAW SEQUENCE LISTING PATENT APPLICATION US/08/206,176

DATE: 03/23/94
TIME: 15:01:27

INPUT SET: S2548.raw

613	AAATGAATTG AAGAAATTTA ATGTTTCTAA ACTAGACCAA CAAAGAATAA TAGTTGTATG	300
614		
615	ACAAGTAAAT AAGCTTTGCT GGGAAGATGT TGCTTAAATG ATAAAATGGT TCAGCCAACA	360
616		
617	AGTGAACCAA AAATTAAATA TTAAC TAAGG AAAGGTAACC ATTTCTGAAG TCATTCCTAG	420
618		
619	CAGAGGACTC AGATATATAT AGGATTGAAG ATCTCTCAGT TAAGTCTAC ATG AAA	475
620		Met Lys
621		1
622		
623	AGG ATG GTT TCT TGG AGC TTC CAC AAA CTT AAA ACC ATG AAA CAT CTA	523
624	Arg Met Val Ser Trp Ser Phe His Lys Leu Lys Thr Met Lys His Leu	
625	5 10 15	
626		
627	TTA TTG CTA CTA TTG TGT GTT TTT CTA GTT AAG TCC CAA GGT GTC AAC	571
628	Leu Leu Leu Leu Leu Cys Val Phe Leu Val Lys Ser Gln Gly Val Asn	
629	20 25 30	
630		
631	GAC AAT GAG GAG GTGAATTTTT TAAAGCATT A TTATATTATT AGTAGTATTA	623
632	Asp Asn Glu Glu	
633	35	
634		
635	TTAATATAAG ATGTAACATA ATCATATTAT GTGCTTATTT TAATGAAATT AGCATTGCTT	683
636		
637	ATAGTTATGA AATGGAATTG TTAACCTCTG ACTTATTGTA TTAAAGAAT GTTTCATAGT	743
638		
639	ATTTCTTATA TAAAAACAAA GTAATTTCTT GTTTTCTAGT TTATCACCTT TGTTTTCTTA	803
640		
641	AGATGAGGAT GGCTTAGCTA ATGTAAGATG TGTTTTTCTC ACTTGCTATT CTGAGTACTG	863
642		
643	TGATTTTCAT TTA CTCTAG CAATACAGGA TTACAATTAA GAGGACAAGA TCTGAAAATC	923
644		
645	TCACAACTA TAAAATAATA AAAGAGCAGA ATTTTAAGAT AAAAGAACT GGTGGTAGGT	983
646		
647	AGATTGTTCT TTGGTGAAGG AAGGTAATAT ATATTGTTAC TGAGATTACT ATTTATAAAA	1043
648		
649	ATTATACTA AGCCTAAAAG CAAAATACAT CAAGTGTAAT GATAGAAAAT GAAATATTGC	1103
650		
651	TTTTTTCAGA TGAAAAGTTC AAATTAGAGT TAGTGTGTAT TGTTATTATT AATAGTTATG	1163
652		
653	AAACACGGTT CAGTCTAATT TATTTATTTG TAGAACAGTT TGTCTCAAC TATTATTTTT	1223
654		
655	GCTGACTTAT TGCTGTTAAT TTGCAGTTAC TAAAATACA GAAATGCATT TAGGACAATG	1283
656		
657	GATATTTAAG AAATTTAAAT TTTATCATCA AACGTATCAT GGCCAAATTT CTTACATATA	1343
658		
659	GCATAGTATC ATTAACTAG AAATAAGAAT ACACAATAAT ATTTAAATGA AGTGATTCAT	1403
660		
661	TTCGGATCAT TATTGAGTTT CAAGGGAAC TGAGTGTTGT ACTTATCAGA CTCTACATGT	1463
662		
663	AAGAACATAT AGTTAATCTG GTTGTGTGTG TAAAACATA TGGTTAATCT GGTAAAGTCT	1523

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/206,176DATE: 03/23/94
TIME: 15:01:34

INPUT SET: S2548.raw

664							
665	GGTTAATCAT	ATTAGGTAAG	AAAAATGTAA	AGAATGTGTA	AGACGAAATT	TTTGTAAAGT	1583
666							
667	ACTCTGCAAA	GCACTTTCAC	ATTTCTGCTT	ATCAACTAAA	CCTCACAGAG	ATAGTTTAAT	1643
668							
669	AGTTTAGGCT	TTAAAATGGA	TTTTGATTAT	TCAACAAGTG	GCCTTCATAA	TTTCTTTAAG	1703
670							
671	TGTTTTTCTT	TAAGTATATA	CTTTCTTTAA	ATATTTTTTA	AAATTTCTTT	TTCTCTAGTA	1763
672							
673	AAGCCAGACC	ATCCATGCTA	CCTCTCTAGT	GGCACTCTGA	AATAAAAAGA	AAATAGTTTT	1823
674							
675	CTCTGTTATA	ATTGTATTTG	TAATAAGCAG	ATGAATCACA	TTTCTTAAAA	TTTGTTTTAG	1883
676							
677	AGAGGGTAAG	CTCTGACTAG	GACCATGACT	TCAATGTGAA	ATATGTATAT	ATCCTCCGAA	1943
678							
679	TCTTTACATA	TTAAGAATGT	ATATAGTCAA	CTGGTTAAAC	AGGAAAATCT	GGAACAGCCT	2003
680							
681	GGCTGGGTTT	TAATCTTAGC	ACCATCCTAC	TAAATGTTAA	ATAATATTAT	AATCTAATGA	2063
682							
683	ATAAATGACA	ATGCAATTCC	AAATAGAGTT	CATCTGATGA	CTTCTAGACT	CACAAAATTG	2123
684							
685	CAAGAGAGCT	CAGTTGTTGC	TCAGTTGTTT	CAAATCATGT	CGTTTGTTAA	TTTGTAATTA	2183
686							
687	AGCTCCAAAG	GATGTATAGC	TACTGACAAA	AAAAAAAATG	AGAATGTAGT	TAATCCAAAT	2243
688							
689	CAAACTTTC	CTATTGCAAT	GCGTATTTTC	TGCTTCATTA	TCCTTTAATA	TAATATTTTA	2303
690							
691	AGTTAGCAAG	TAATTTTAAT	TACAATGCAC	AAGCCTTGAG	AATTATTTTA	AATATAAGAA	2363
692							
693	AATCATAATG	TTTGATAAAG	AAATCATGTA	AGAAATTTCA	AGATAATGGT	TTAACAAATA	2423
694							
695	ATTTTGTTGA	TAGAAGATAA	GACTAAAAGT	GAAATTCGAA	GTGGAGAGGA	CACTTAAACT	2483
696							
697	GTAGTACTTG	TTATGTGTGA	TTCCAGTAAA	AATAGTAATG	AGCACTTATT	ATTGCCAAGT	2543
698							
699	ACTGTTCTGA	GGGTACCATA	TGCAATAAGT	TATTTAATCC	TTACAATAAT	CTTGTAAGGC	2603
700							
701	AGATTCAAAC	TATCATTACA	CTTATTTTAC	AGATGAGAAA	ACTGGGGCAC	AGATAAAGCA	2663
702							
703	ACTTGCCCAA	GGTCTCATAG	CTGTAAGTCA	ACCCTACGGT	CAAGACCTAC	AAGTAGCCGA	2723
704							
705	GCTCCAGAGT	ACATTATGAG	GGTCAAAGAT	TGTCTTATTA	CAAATAAATT	CCAAGTAGAA	2783
706							
707	TCAACCTTTA	ATAAGTCTTT	AATGTCTCTT	AAATATGTTT	ATATAGGAGT	CTAATCACCA	2843
708							
709	ATTCACAAAA	ATGAAAGTAG	GGAAATGATT	AACAATAATC	ATAGGAATCT	AACAATCCAA	2903
710							
711	GTGGCTTGAG	AATATTCATT	CTTCTTGACA	GTATAGATTC	TTTACAATTT	CGTAAGTTCC	2963
712							
713	AATGTATGTT	TTAGGAATAT	GAGGTCATTA	CTATTCATAA	TCTGATACAG	CTTTATCCTA	3023
714							

RAW SEQUENCE LISTING PATENT APPLICATION US/08/206,176

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INPUT SET: S2548.raw

715	AGGCCTCTCT TTAAAACTA CACTGCATCA TAGCTTTTTT GTGCAGTTGG TCTTTCTACT	3083
716		
717	GTTACTGAAC AGTAAGCAAC CTACAGATTC ACTATCACCA ACCAGCCAGT TGATGGATCT	3143
718		
719	TAAGCAAATT ATCAAGCTTG TGATAACCTA AATTATAAAA TGAGGGTGTT GGAATAGTTA	3203
720		
721	CATTCCAAAT CTTCTATAAC ACTCTGTATT ATATTTCTGC CTCATTCTTT GTAG GGT	3260
722		Gly
723		
724		
725	TTC TTC AGT GCC CGT GGT CAT CGA CCC CTT GAC AAG AAG AGA GAA GAG	3308
726	Phe Phe Ser Ala Arg Gly His Arg Pro Leu Asp Lys Lys Arg Glu Glu	
727	40 45 50 55	
728		
729	GCT CCC AGC CTG AGG CCT GCC CCA CCG CCC ATC AGT GGA GGT GGC TAT	3356
730	Ala Pro Ser Leu Arg Pro Ala Pro Pro Pro Ile Ser Gly Gly Gly Tyr	
731	60 65 70	
732		
733	CGG GCT CGT CCA GCC AAA GCA GCT GCC ACT CAA AAG AAA GTA GAA AGA	3404
734	Arg Ala Arg Pro Ala Lys Ala Ala Thr Gln Lys Lys Val Glu Arg	
735	75 80 85	
736		
737	AAA GCC CCT GAT GCT GGA GGC TGT CTT CAC GCT GAC CCA GAC CTG	3449
738	Lys Ala Pro Asp Ala Gly Gly Cys Leu His Ala Asp Pro Asp Leu	
739	90 95 100	
740		
741	GTGGGTGCAC TGATGTTTCT TGCAGTGGTG GCTCTCTCAT GCAGAGAAAG CCTGTAGTCA	3509
742		
743	TGGCAGTCTG CTAATGTTTC ACTGACCCAC ATTACCATCA CTGTTATTTT GTTTGTTTAT	3569
744		
745	TTTGGAATA AAATTCAAAA CATAAACATA TTGGGCCTTT GGTTTAGGCT TTCTTTCTTG	3629
746		
747	TTTTCTTTGG TCTGGGCCCA AAATTTCAAAA TTAGGATATG TGGGTGCCAC CTTTCCATTT	3689
748		
749	GTATTTTGCC ACTGCCTTTG TTTAGTTGGT AAAATTTTCA TAGCCCAATT ATATTTTTC	3749
750		
751	TGGGGTAAGT AATATTTTAA ATCTCTATGA GAGTATGATG ATGACTTTCG AATTTCTGGT	3809
752		
753	CTTACAGAAA ACCAAATAAT AAATTTTAT GTTGGCTAAT CGTATCGCTG AATTTTCCTA	3869
754		
755	TGTGCTATTT TAACAAATGT CCATGACCCA AATCCTTCAT CTAATGCCTG CTATTTTCTT	3929
756		
757	TGTTTTTAG GGG GTG TTG TGT CCT ACA GGA TGT CAG TTG CAA GAG GCT	3977
758	Gly Val Leu Cys Pro Thr Gly Cys Gln Leu Gln Glu Ala	
759	105 110 115	
760		
761	TTG CTA CAA CAG GAA AGG CCA ATC AGA AAT AGT GTT GAT GAG TTA AAT	4025
762	Leu Leu Gln Gln Glu Arg Pro Ile Arg Asn Ser Val Asp Glu Leu Asn	
763	120 125 130	
764		
765	AAC AAT GTG GAA GCT GTT TCC CAG ACC TCC TCT TCC TTT CAG TAC	4073

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INPUT SET: S2548.raw

766	Asn Asn Val Glu Ala Val Ser Gln Thr Ser Ser Ser Ser Phe Gln Tyr	
767	135 140 145	
768		
769	ATG TAT TTG CTG AAA GAC CTG TGG CAA AAG AGG CAG AAG CAA GTA AAA G	4122
770	Met Tyr Leu Leu Lys Asp Leu Trp Gln Lys Arg Gln Lys Gln Val Lys	
771	150 155 160	
772		
773	GTAGATATCC TTGTGCTTTC CATTCGATTT TCAGCTATAA AATTGGAACC GTTAGACTGC	4182
774		
775	CACGAGAATG CATGGTTGTG AGAAGATTAA CATTTCTGGG TTAGTGAATA GCATTCATAC	4242
776		
777	GCTTTTGGGC ACCTTCCCCT GCAACTTGCC AGATAAGCAC TATTCAGCTC TTATTCCCAG	4302
778		
779	TCTGACATCA GCAAGTGTGA TTTTCTATGA AAAATTCTAC TATGACTCCT TATTTTAAGT	4362
780		
781	ATACAAGAAA CTTGTGACTC AGAAGATAAT ATTTACAGAG TGGAAAAAAA CCCCTAGCAT	4422
782		
783	TTATAGTTTT AACATTTGAG GTTTTGAATG AGAGAGTTAT CCATAATATA TTCAATTGTG	4482
784		
785	TTGTGGATAA TGACACCTAA CCTGTGAATC TTGAGGTCAG AATGTTGAGT GCTGTTGACT	4542
786		
787	TGGTGGTCAG GAAACAGCTA GTGCGTGAGC CTGGCACAGG CATCTCAGTG AGTAGCATAC	4602
788		
789	CCACAGTTGG AAATTTTTCA AAGAAATCAA AGGAATCATG ACATCTTATA AATTTCAAGG	4662
790		
791	TTCTGCTATA CTTATGTGAA ATGGATAAAT AAATCAAGCA TATCCACTCT GTAAGATTGA	4722
792		
793	ACTTCTCAGA TGGAAGACCC CAATACTGCT TTCTCCTCTT TTCCCTCACC AAAGAAATAA	4782
794		
795	ACAACCTATT TCATTTATTA CTGGACACAA TCTTTAGCGT ATACCTATGG TAAATTACTA	4842
796		
797	GTATGGTGGT TAGGATTTAT GTTAATTTGT ATATGTCATG CGCCAAATCA TTTCCACTAA	4902
798		
799	ATATGACTAT ATATCATAAC TGCTTGGTGA TAGCTCAGTG TTTAATAGTT TATTCTCAGA	4962
800		
801	AAATCAAAAT TGTATAGTTA AATACATTAG TTTTATGAGG CAAAAATGCT AACTATTTCT	5022
802		
803	ACATAATTTT ATTTTTCCAG AT AAT GAA AAT GTA GTC AAT GAG TAC TCC	5071
804	Asp Asn Glu Asn Val Val Asn Glu Tyr Ser	
805	165 170	
806		
807	TCA GAA CTG GAA AAG CAC CAA TTA TAT ATA GAT GAG ACT GTG AAT AGC	5119
808	Ser Glu Leu Glu Lys His Gln Leu Tyr Ile Asp Glu Thr Val Asn Ser	
809	175 180 185	
810		
811	AAT ATC CCA ACT AAC CTT CGT GTG CTT CGT TCA ATC CTG GAA AAC CTG	5167
812	Asn Ile Pro Thr Asn Leu Arg Val Leu Arg Ser Ile Leu Glu Asn Leu	
813	190 195 200 205	
814		
815	AGA AGC AAA ATA CAA AAG TTA GAA TCT GAT GTC TCA GCT CAA ATG GAA	5215
816	Arg Ser Lys Ile Gln Lys Leu Glu Ser Asp Val Ser Ala Gln Met Glu	

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817		210		215		220	
818							
819	TAT TGT CGC ACC CCA TGC ACT GTC AGT TGC AAT ATT CCT GTG GTG TCT						5263
820	Tyr Cys Arg Thr Pro Cys Thr Val Ser Cys Asn Ile Pro Val Val Ser						
821		225		230		235	
822							
823	GGC AAA G GTAAC TGATT CATAAACATA TTTT TAGAGA GTTCCAGAAG AACTCACACA						5320
824	Gly Lys						
825							
826							
827	CCAAAAATAA GAGAACAACA ACAACAACAA AAATGCTAAG TGGATTTTCC CAACAGATCA						5380
828							
829	TAATGACATT ACAGTACATC ATAAAAATAT CCTTAGCCAG TTGTGTTTTG GACTGGCCTG						5440
830							
831	GTGCATTTGC TGGTTTTGAT GAGCAGGATG GGGCACAGGT AGTCCCAGGG GTGGCTGATG						5500
832							
833	TGTGCATCTG CGTACTGGCT TGAACAGATG GCAGAACCAC AGATAGATGT AGAAGTTTCT						5560
834							
835	CCATTTTGTG TGTTCTGGGA GCTCATGGAT ATTCCAGGAC ACAAAGGTG GAGAAGAGCT						5620
836							
837	TTGTTTCATCC TCTTAGCAGA TAAACGTCCT CAAACTGGG TTGGACTTAC TAAAGTAAAA						5680
838							
839	TGAAAATCTA ATATTTGTTA TATTATTTTC AAAGGTCTAT AATAACACAC TCCTTAGTAA						5740
840							
841	CTTATGTAAT GTTATTTTAA AGAATTGGTG ACTAAATACA AAGTAATTAT GTCATAAACC						5800
842							
843	CCTGAACATA ATGTTGTCTT ACATTTGCAG AA TGT GAG GAA ATT ATC AGG AAA						5853
844							
845							
846							
847	GGA GGT GAA ACA TCT GAA ATG TAT CTC ATT CAA CCT GAC AGT TCT GTC						5901
848	Gly Gly Glu Thr Ser Glu Met Tyr Leu Ile Gln Pro Asp Ser Ser Val						
849		250		255		260	
850							
851	AAA CCG TAT AGA GTA TAC TGT GAC ATG AAT ACA GAA AAT GGA G						5944
852	Lys Pro Tyr Arg Val Tyr Cys Asp Met Asn Thr Glu Asn Gly						
853		265		270		275	
854							
855	GTAAGCTTTC GACAGTTGTT GACCTGTTGA TCTGTAATTA TTTGGATACC GTAAAATGCC						6004
856							
857	AGGAAACAAG GCCAGGTGTG GTGGCTCATA CCTGTAATTC CAGCACCTTG GGAGGCCAAA						6064
858							
859	GTGGGCTGAT AGCTTGAGCC TAGGAGTTTG AAAGTAGCCT GGGCAACATA ATGAGACCCCT						6124
860							
861	AACTCTACAA AAAAAAAAAA AATACCAAAA AAAAAAAAAA AATCAGCTGT GTTGGTAGTA						6184
862							
863	TGTGCCTGTA GTCCCAGCTA TCCAGGAGGC TGAGATGGGA GATCACCTGA GCCACAACC						6244
864							
865	TGGAGTCTTG ATCATGCTAC TGAAGTGTAG CCTGGGCAAC AGAGGATAGT GAGATCCTGT						6304
866							
867	CTCAAAAAA AAAATTAATT AAAAAGCCAG GAAACAAGAC TTAGCTCTAA CATCTAACAT						6364

RAW SEQUENCE LISTING PATENT APPLICATION US/08/206,176

DATE: 03/23/94
TIME: 15:02:01

INPUT SET: S2548.raw

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868
869 AGCTGACAAA GGAGTAATTT GATGTGGAAT TCAACCTGAT ATTTAAAAGT TATAAAATAT 6424
870
871 CTATAATTCA CAATTTGGGG TAAGATAAAG CACTTGCAGT TTCCAAAGAT TTTACAAGTT 6484
872
873 TACCTCTCAT ATTTATTTCC TTATTGTGTC TATTTTAGAG CACCAAATAT ATACTAAATG 6544
874
875 GAATGGACAG GGGATTGAGA TATTATTTTC AAAGTGACAT TATTGCTGT TGGTTAATAT 6604
876
877 ATGCTCTTTT TGTTTCTGTC AACCAAAG GA TGG ACA GTG ATT CAG AAC CGT 6655
878 Gly Trp Thr Val Ile Gln Asn Arg
879 280 285
880
881 CAA GAC GGT AGT GTT GAC TTT GGC AGG AAA TGG GAT CCA TAT AAA CAG 6703
882 Gln Asp Gly Ser Val Asp Phe Gly Arg Lys Trp Asp Pro Tyr Lys Gln
883 290 295 300
884
885 GGA TTT GGA AAT GTT GCA ACC AAC ACA GAT GGG AAG AAT TAC TGT GGC 6751
886 Gly Phe Gly Asn Val Ala Thr Asn Thr Asp Gly Lys Asn Tyr Cys Gly
887 305 310 315
888
889 CTA CCA G GTAACGAACA GGCATGCAAA ATAAAATCAT TCTATTTGAA ATGGGATTTT 6808
890 Leu Pro
891
892
893 TTTTAATTAA AAAACATTCA TTGTTGGAAG CCTGTTTTAG GCAGTTAAGA GGAGTTTCCT 6868
894
895 GACAAAAATG TGGAAGCTAA AGATAAGGGA AGAAAGGCAG TTTTGTAGTTT CCCAAAATTT 6928
896
897 TATTTTTGGT GAGAGATTTT ATTTTGTTTT TCTTTTAG GT GAA TAT TGG CTT 6980
898 Gly Glu Tyr Trp Leu
899 320
900
901 GGA AAT GAT AAA ATT AGC CAG CTT ACC AGG ATG GGA CCC ACA GAA CTT 7028
902 Gly Asn Asp Lys Ile Ser Gln Leu Thr Arg Met Gly Pro Thr Glu Leu
903 325 330 335 340
904
905 TTG ATA GAA ATG GAG GAC TGG AAA GGA GAC AAA GTA AAG GCT CAC TAT 7076
906 Leu Ile Glu Met Glu Asp Trp Lys Gly Asp Lys Val Lys Ala His Tyr
907 345 350 355
908
909 GGA GGA TTC ACT GTA CAG AAT GAA GCC AAC AAA TAC CAG ATC TCA GTG 7124
910 Gly Gly Phe Thr Val Gln Asn Glu Ala Asn Lys Tyr Gln Ile Ser Val
911 360 365 370
912
913 AAC AAA TAC AGA GGA ACA GCC GGT AAT GCC CTC ATG GAT GGA GCA TCT 7172
914 Asn Lys Tyr Arg Gly Thr Ala Gly Asn Ala Leu Met Asp Gly Ala Ser
915 375 380 385
916
917 CAG CTG ATG GGA GAA AAC AGG ACC ATG ACC ATT CAC AAC GGC ATG TTC 7220
918 Gln Leu Met Gly Glu Asn Arg Thr Met Thr Ile His Asn Gly Met Phe

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DATE: 03/23/94
TIME: 15:02:08

INPUT SET: S2548.raw

919	390	395	400	
920				
921	TTC AGC ACG TAT GAC AGA GAC AAT GAC GGC	TG	GTATGTGTGG	7262
922	Phe Ser Thr Tyr Asp Arg Asp Asn Asp Gly Trp			
923	405	410	415	
924				
925	CACTCTTTGC TCCTGCTTTA AAAATCACAC TAATATCATT ACTCAGAATC ATTAACAATA			7322
926				
927	TTTTTAATAG CTACCACTTC CTGGGCACTT ACTGTCAGCC ACTGTCCTAA GCTCTTTATG			7382
928				
929	CATCACTCGA AAGCATTTCa ACTATAAGGT AGACATTCTT ATTCTCATT TACAGATGAG			7442
930				
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933	TTTGAGCACA GTTACTTTCT GAATAATGAG CATTTAGATA AATACCTATA TCTCTATATT			7562
934				
935	CTAAAGTGTG TGTGAAAACCT TTCATTTTCA TTTCCAGGGT TCTCTGATAC TAAGGGTTGT			7622
936				
937	AAAAGCTATT ATTCCAGTAT AAAGTAACAA ACACAGTCCC TAGATGGATT GCCACAAAGG			7682
938				
939	CCCAGTTATC TCTCTTTCTT GCTATAGGGC ACAGGAGGTC TTTGGTGTAT TAGTGTGACT			7742
940				
941	CTATGTATAG CACCCAAAGG AAAGACTACT GTGCACACGA GTGTAGCAGT CTTTTATGGG			7802
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943	TAATCTGCAA AACGTAACCTT GACCACCGTA GTTCTGTTTC TAATAACGCC AAACACATTT			7862
944				
945	TCTTTCAG G TTA ACA TCA GAT CCC AGA AAA CAG TGT TCT AAA GAA GAC			7910
946	Leu Thr Ser Asp Pro Arg Lys Gln Cys Ser Lys Glu Asp			
947		420	425	
948				
949	GGT GGT GGA TGG TGG TAT AAT AGA TGT CAT GCA GCC AAT CCA AAC GGC			7958
950	Gly Gly Gly Trp Trp Tyr Asn Arg Cys His Ala Ala Asn Pro Asn Gly			
951	430	435	440	
952				
953	AGA TAC TAC TGG GGT GGA CAG TAC ACC TGG GAC ATG GCA AAG CAT GGC			8006
954	Arg Tyr Tyr Trp Gly Gly Gln Tyr Thr Trp Asp Met Ala Lys His Gly			
955	445	450	455	460
956				
957	ACA GAT GAT GGT GTA GTA TGG ATG AAT TGG AAG GGG TCA TGG TAC TCA			8054
958	Thr Asp Asp Gly Val Val Trp Met Asn Trp Lys Gly Ser Trp Tyr Ser			
959		465	470	475
960				
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962	Met Arg Lys Met Ser Met Lys Ile Arg Pro Phe Phe Pro Gln Gln			
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967	TTCTTTCATA CATTATATTC CTCTAAAACT CTCAAGCAGA CGTGAGTGTG ACTTTTTTGAA			8229
968				
969	AAAAGTATAG GATAAATTAC ATTAAAATAG CACATGATTT TCTTTTGTTT TCTTCATTTT			8289

RAW SEQUENCE LISTING PATENT APPLICATION US/08/206,176

DATE: 03/23/94
TIME: 15:02:15

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975 GGAAAACCAT GACGGAAAGG AAAAAGTAT GTTTAAAAGT CCACTTTTAA AACTATATTT 8469
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977 ATTTATGTAG GATCTGTCAA AGAAAGTTC CAAAAGATT TATTAATTAA ACCAGACTCT 8529
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979 GTTGCAATAA GTTAATGTTT TCTTGTTTTG TAATCCACAC ATTCAATGAG TTAGGCTTTG 8589
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981 CACTTGTAAG GAAGGAGAAG CGTTCACAAC CTCAAATAGC TAATAAACCG GTCTTGAATA 8649
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983 TTTGAAGATT TAAATCTGA CTCTAGGACG GGCACGGTGG CTCACGACTA TAATCCCAAC 8709
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985 ACTTTGGGAG GCTGAGGCGG GCGGTCACAA GGTCAGGAGT TCAAGACCAG CCTGACCAAT 8769
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987 ATGGTGAAAC CCCATCTCTA CTAAAAATAC AAAAATTAGC CAGGCGTGGT GGCAGGTGCC 8829
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989 TGTAGGTCCC AGCTAGCCTG TGAGGTGGAG ATTGCATTGA GCCAAGATC 8878
990

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(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 491 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

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1001
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1006 His Leu Leu Leu Leu Leu Cys Val Phe Leu Val Lys Ser Gln Gly
1007 20 25 30
1008
1009 Val Asn Asp Asn Glu Glu Gly Phe Phe Ser Ala Arg Gly His Arg Pro
1010 35 40 45
1011
1012 Leu Asp Lys Lys Arg Glu Glu Ala Pro Ser Leu Arg Pro Ala Pro Pro
1013 50 55 60
1014
1015 Pro Ile Ser Gly Gly Gly Tyr Arg Ala Arg Pro Ala Lys Ala Ala Ala
1016 65 70 75 80
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1018 Thr Gln Lys Lys Val Glu Arg Lys Ala Pro Asp Ala Gly Gly Cys Leu
1019 85 90 95
1020

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RAW SEQUENCE LISTING PATENT APPLICATION US/08/206,176

DATE: 03/23/94
TIME: 15:02:22

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1025			115					120					125			
1026																
1027	Glu	Leu	Asn	Asn	Asn	Val	Glu	Ala	Val	Ser	Gln	Thr	Ser	Ser	Ser	Ser
1028		130					135					140				
1029																
1030	Phe	Gln	Tyr	Met	Tyr	Leu	Leu	Lys	Asp	Leu	Trp	Gln	Lys	Arg	Gln	Lys
1031	145					150				155						160
1032																
1033																
1034	Gln	Val	Lys	Asp	Asn	Glu	Asn	Val	Val	Asn	Glu	Tyr	Ser	Ser	Glu	Leu
1035				165						170					175	
1036																
1037	Glu	Lys	His	Gln	Leu	Tyr	Ile	Asp	Glu	Thr	Val	Asn	Ser	Asn	Ile	Pro
1038			180					185						190		
1039																
1040	Thr	Asn	Leu	Arg	Val	Leu	Arg	Ser	Ile	Leu	Glu	Asn	Leu	Arg	Ser	Lys
1041		195						200					205			
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1049	Cys	Glu	Glu	Ile	Ile	Arg	Lys	Gly	Gly	Glu	Thr	Ser	Glu	Met	Tyr	Leu
1050				245						250					255	
1051																
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1053			260						265					270		
1054																
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1057																
1058	Ser	Val	Asp	Phe	Gly	Arg	Lys	Trp	Asp	Pro	Tyr	Lys	Gln	Gly	Phe	Gly
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1060																
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1065				325						330					335	
1066																
1067	Pro	Thr	Glu	Leu	Leu	Ile	Glu	Met	Glu	Asp	Trp	Lys	Gly	Asp	Lys	Val
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1069																
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1071		355					360						365			

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/206,176DATE: 03/23/94
TIME: 15:02:29

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1077 385 390 395 400
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1079 Asn Gly Met Phe Phe Ser Thr Tyr Asp Arg Asp Asn Asp Gly Trp Leu
1080 405 410 415
1081
1082 Thr Ser Asp Pro Arg Lys Gln Cys Ser Lys Glu Asp Gly Gly Gly Trp
1083 420 425 430
1084
1085 Trp Tyr Asn Arg Cys His Ala Ala Asn Pro Asn Gly Arg Tyr Tyr Trp
1086 435 440 445
1087
1088 Gly Gly Gln Tyr Thr Trp Asp Met Ala Lys His Gly Thr Asp Asp Gly
1089 450 455 460
1090
1091 Val Val Trp Met Asn Trp Lys Gly Ser Trp Tyr Ser Met Arg Lys Met
1092 465 470 475 480
1093
1094 Ser Met Lys Ile Arg Pro Phe Phe Pro Gln Gln
1095 485 490
1096
1097
1098 (2) INFORMATION FOR SEQ ID NO:5:
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1100 (i) SEQUENCE CHARACTERISTICS:
1101 (A) LENGTH: 10564 base pairs
1102 (B) TYPE: nucleic acid
1103 (C) STRANDEDNESS: double
1104 (D) TOPOLOGY: linear
1105
1106 (ii) MOLECULE TYPE: DNA (genomic)
1107
1108
1109 (vii) IMMEDIATE SOURCE:
1110 (B) CLONE: human fibrinogen gamma chain
1111
1112 (ix) FEATURE:
1113 (A) NAME/KEY: CDS
1114 (B) LOCATION: join(1799..1876, 1973..2017, 2207..2390, 2510
1115 ..2603, 4211..4341, 4645..4778, 5758..5942, 7426
1116 ..7703, 9342..9571)
1117
1118
1119 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:
1120
1121 CTACACACTT CTTGAAGGCA AAGGCAATGC TGAAGTCACC TTTCATGTTC AAATCATATT
1122

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/206,176DATE: 03/23/94
TIME: 15:02:36

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1125	TTACATATTT	TCATTATATA	TATTTTAGTA	GATAATATTT	ATATACATTC	AACATTCTAA	180
1126							
1127	ATATAGAAAG	TTTACAGAGA	AAAATAAAGC	CTTTTTTTCC	AATCCTGTCC	TCCACCTCTG	240
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1129	CATCCCATT	TTCTTCACAG	AGGCAACTGA	TTCAAGTCAT	TACATAGTTA	TTGAGTGTTA	300
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1131	ACTACAATA	TGTTAAGTAC	AGCTATATAT	GTTAGATGCC	GTAGCCACAG	AAATCAGTTT	360
1132							
1133	ACAATCTAAT	GCAGTGGATA	CAGCATGTAT	ACATATAATA	TAAGGTTGCT	ACAAATGCTA	420
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1135	TCTGAGGTAG	AGCTGTTTGA	AAGAATACTA	ATACTTAAAT	GTTTAATTCA	ACTGACTTGA	480
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1137	TTGACAACG	ATTAGCTGAG	TGGAAAAGAT	GGATGAGAAA	GATTGTGAGA	CTTAATTGGC	540
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1139	TGGTGGTATG	GTGATATGAT	TGACAATAAC	TGCTAAGTCA	GAGAGGGATA	TATTAAGGAG	600
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1143	TACTGAATAT	GAATATTTAT	CTTTGTTTTT	GAGTCAATAA	ATATACCTTT	GTAAAGACAG	720
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1147	AAAACCTTATA	ATAAGCTTGG	TTCCAGAGGA	AGAAATGAGG	GATAACCAAA	AATAGAGACA	840
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1164							
1165	TAACTGATCC	CTAAGCTAAG	AAAGTTCTTT	TGGTAATTCA	GGTGATGGCA	GCAGGACCCA	1380
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1168							
1169	ACTGGAAGAA	GTTGCATCAC	ACAGCCTCCA	GGACTGCCCT	CCTCCTCACA	GCAATGGATA	1500
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1171	ATGCTTCACT	AGCCTTTGCA	GATAATTTTG	GATCAGAGAA	AAAACCTTGA	GCTGGGCCAA	1560
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RAW SEQUENCE LISTING PATENT APPLICATION US/08/206,176

DATE: 03/23/94
TIME: 15:02:43

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1177 TCAGCTCCAG CCATTTGCAG TCCTGGCTAT CCCAGGAGCT TACATAAAGG GACAATTGGA      1740
1178
1179 GCCTGAGAGG TGACAGTGCT GACACTACAA GGCTCGGAGC TCCGGGCACT CAGACATC      1798
1180
1181 ATG AGT TGG TCC TTG CAC CCC CGG AAT TTA ATT CTC TAC TTC TAT GCT      1846
1182 Met Ser Trp Ser Leu His Pro Arg Asn Leu Ile Leu Tyr Phe Tyr Ala
1183   1             5             10             15
1184
1185 CTT TTA TTT CTC TCT TCA ACA TGT GTA GCA GTAAGTGTGC TCTTCACAAA      1896
1186 Leu Leu Phe Leu Ser Ser Thr Cys Val Ala
1187           20           25
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1189 ACGTTGTTTA AAATGGAAAG CTGGAAAATA AAACAGATAA TAAACTAGTG AAATTTTCGT      1956
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1192           Tyr Val Ala Thr Arg Asp Asn Cys Cys Ile Leu
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1194
1195 GAT GAA AGA TTC GTAAGTAGTT TTTATGTTTC TCCCTTTGTG TGTGAACTGG      2057
1196 Asp Glu Arg Phe
1197           40
1198
1199 AGAGGGGCAG AGGAATAGAA ATAATTCCTT CATAAATATC ATCTGGCACT TGTAACTTTT      2117
1200
1201 TAAAAACATA GTCTAGGTTT TACCTATTTT TCTTAATAGA TTTTAAGAGT AGCATCTGTC      2177
1202
1203 TACATTTTTA ATCACTGTTA TATTTTCAG GGT AGT TAT TGT CCA ACT ACC TGT      2230
1204           Gly Ser Tyr Cys Pro Thr Thr Cys
1205                   45
1206
1207 GGC ATT GCA GAT TTC CTG TCT ACT TAT CAA ACC AAA GTA GAC AAG GAT      2278
1208 Gly Ile Ala Asp Phe Leu Ser Thr Tyr Gln Thr Lys Val Asp Lys Asp
1209   50             55             60             65
1210
1211 CTA CAG TCT TTG GAA GAC ATC TTA CAT CAA GTT GAA AAC AAA ACA TCA      2326
1212 Leu Gln Ser Leu Glu Asp Ile Leu His Gln Val Glu Asn Lys Thr Ser
1213           70           75           80
1214
1215 GAA GTC AAA CAG CTG ATA AAA GCA ATC CAA CTC ACT TAT AAT CCT GAT      2374
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1217           85           90           95
1218
1219 GAA TCA TCA AAA CCA A GTGAGAAAAT AAAGACTACT GACCAAAAAA      2420
1220 Glu Ser Ser Lys Pro
1221           100
1222
1223 TAATAATAAT AATCTGTGAA GTTCTTTTGC TGTTGTTTTA GTTGTTCTAT TTGCTTAAGG      2480
1224

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RAW SEQUENCE LISTING PATENT APPLICATION US/08/206,176

DATE: 03/23/94
TIME: 15:02:49

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1229	AAG TCC AGG ATA ATG TTA GAA GAA ATT ATG AAA TAT GAA GCA TCG ATT	2580
1230	Lys Ser Arg Ile Met Leu Glu Glu Ile Met Lys Tyr Glu Ala Ser Ile	
1231	115 120 125	
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1233	TTA ACA CAT GAC TCA AGT ATT CG GTAAGGATTT TTGTTTAAAT TTGCTCTGCA	2633
1234	Leu Thr His Asp Ser Ser Ile Arg	
1235	130	
1236		
1237	AGACTGATTT AGTTTTTATT TAATATTCTA TACTTGAGTG AAAGTAATTT TTAATGTGTT	2693
1238		
1239	TTCCCCATTT ATAATATCCC AGTGACATTA TGCCTGATTA TGTTGAGCAT AGTAGAGATA	2753
1240		
1241	GAAGTTTTTA GTGCAATATA AATTATACTG GGTTATAATT GCTTATTAAT AATCACATTG	2813
1242		
1243	AAGAAAGATG TTCTAGATGT CTTCAAATGC TAGTTTGACC ATATTTATCA AAAATTTTTT	2873
1244		
1245	CCCCATCCCC CATTTATCTT ACAACATAAA ATCAATCTCA TAGGAATTTG GGTGTTGAAA	2933
1246		
1247	ATAAAATCCT CTTTATAAAA ATGCTGACAA ATTGGTGGTT AAAAAAATTA GCAAGCAGAG	2993
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1249	GCATAGTAAG GATTTTGGCT CCTAAAGTAA ATTATATTGA ATGTGGAGCA GGAAGAAACA	3053
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1252		
1253	ACCTGCATAG TCTCTTCCCT TCATTTGGAA GTGAATGTCT CTGTTAAAGC TTCTCAGGGA	3173
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1255	CTCATAACT TTCTGAACAT AAGGTCTCAG ATACAGTTTT AATATTTTTC CCCAATTTTT	3233
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1257	TTTTCTGAAT TTTTCTCAAA GCAGCTTGAG AAATTGAGAT AAATAGTAGC TAGGGAGAAG	3293
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1259	TGGCCCAGGA AAGATTTCTC CTCTTTTTCG TATCAGAGGG CCCTTGTTAT TATTGTTATT	3353
1260		
1261	ATTATTACTT GCATTATTAT TGTCCATCAT TGAAGTTGAA GGAGGTTATT GTACAGAAAT	3413
1262		
1263	TGCCTAAGAC AAGGTAGAGG GAAAACGTGG ACAAATAGTT TGTCTACCCT TTTTACTTTC	3473
1264		
1265	AAAGAAAGAA CGGTTTATGC ATTGTAGACA GTTTTCTATC ATTTTGGAT ATTTGCAAGC	3533
1266		
1267	CACCCTGTAA GTAACACAA AAGGAGGGTT TTTACTTCCC CCAGTCCATT CCCAAAGCTA	3593
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1271	AACGTTCCAG ATCATGTCCC TGTGTAAGTT ATATTTTAGA TTGAAGCTTA TATGTATAGC	3713
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1273	CTCAGTAGAT CCACAAGTGA AAGGTATACT CCTTCAGCAC ATGTGAATTA CTGAAGTGAAG	3773
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[illegible]

RAW SEQUENCE LISTING PATENT APPLICATION US/08/206,176

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1331	TAGTTTCAGA GTTTGTGACT TGACTCTATA TTGTACTGGC ACTGACTTTG TAGATTCATG	5078
1332		
1333	GTGGCACATA ATCATAGTAC CACAGTGACA AATAAAAAGA AGGAAACTCT TTTGTCAGGT	5138
1334		
1335	AGGTCAAGAC CTGAGGTTTC CCATCACAAG ATGAGGAAGC CCAACACCAC CCCCCACCAC	5198
1336		
1337	CCCACCACCA TCACCACCCT TTCACACACC AGAGGATACA CTTGGGCTGC TCCAAGACAA	5258
1338		
1339	GGAACCTGTG TTGCATCTGC CACTTGCTGA TACCCACTAG GAATCTTGGC TCCTTTACTT	5318
1340		
1341	TCTGTTTACC TCCCACCACT GTTATAACTG TTTCTACAGG GGGCGCTCAG AGGGAATGAA	5378
1342		
1343	TGGTGAAGC ATTAGTTGCC AGACACCGAT TGAGCAATGG GTTCCATCAT AAGTGTAAGA	5438
1344		
1345	ATCAGTAATA TCCAGCTAGA GTTCTGAAGT CGTCTAGGTG TCTTTTTAAT ATTACCACTC	5498
1346		
1347	ATTTAGAATT TATGATGTGC CAGAAACCCT CTTAAGTATT TCTCTTATAT TCTCTCTCAT	5558
1348		
1349	GATCCTTGCA GCAACCCTAA GAAGTAACCA TCATTTTTCC TATTTGATAC ATGAGGAAAC	5618
1350		
1351	TGAGGTAGCT TGGCCAAGAT CACTTAGTTG GGAGTTGATA GAACCAGTGC TCTGTATTTT	5678
1352		
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1355	CTTGCAAATG TGTAATTAG AGA CTT GAT GGC AGT GTA GAT TTC AAG AAA AAC	5790
1356	Arg Leu Asp Gly Ser Val Asp Phe Lys Lys Asn	
1357	225 230	
1358		
1359	TGG ATT CAA TAT AAA GAA GGA TTT GGA CAT CTG TCT CCT ACT GGC ACA	5838
1360	Trp Ile Gln Tyr Lys Glu Gly Phe Gly His Leu Ser Pro Thr Gly Thr	
1361	235 240 245	
1362		
1363	ACA GAA TTT TGG CTG GGA AAT GAG AAG ATT CAT TTG ATA AGC ACA CAG	5886
1364	Thr Glu Phe Trp Leu Gly Asn Glu Lys Ile His Leu Ile Ser Thr Gln	
1365	250 255 260 265	
1366		
1367	TCT GCC ATC CCA TAT GCA TTA AGA GTG GAA CTG GAA GAC TGG AAT GGC	5934
1368	Ser Ala Ile Pro Tyr Ala Leu Arg Val Glu Leu Glu Asp Trp Asn Gly	
1369	270 275 280	
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1372	Arg Thr Ser	
1373		
1374		
1375	TTGCCTGGAA TGTGCACTTT CCAACTATCA ATAGACAATG GCAAATGCAG CCTGACAAAT	6042
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RAW SEQUENCE LISTING
PATENT APPLICATION US/08/206,176DATE: 03/23/94
TIME: 15:03:10

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1383 ATTATAATTT TATCTAGTCT AAATTACTAT TTCATGAAGC AGGTATTATT ATTAATCCCA 6282
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1385 TTTTATAGAT TAACTTGCTC AAAGTCACAT TGCTGATAAG TGGTAGAGGT AGAATTTCAGA 6342
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1387 CTCAAGTAGT TTAACTTTAG AGCCTGTCCT CTTAACAACCT ATCCTGGTTG AAAAGCAAAT 6402
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1389 ACAGCCTCTT CAGACTTCTC AGTGCCTTGA TGGCCATTTA TTCTGTCAAA TCATGAGCTA 6462
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1391 CCCTAAAAGT AAACCAGCTA GCTCTTTTGA TGATCTAGAG GCTTCTTTTT GCTTGAGATA 6522
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1393 TTTGAAGGTT TTAAGCATTG TTACCTAATT AAAATGCAGA AAAATATCCA ACCCTCTTGT 6582
1394
1395 TATGTTTAAG GAATAGTGAA ATATATTGTC TTCAAACACA TGGACTTTTT TTTATTGCTT 6642
1396
1397 GGTGGGTTTT TAATCCAGAA AGTGCTATAG TCAGTAGACC TTCTTCTAGG AAAGGACCTT 6702
1398
1399 CCATTTCCCA GCCACTGGAG ATTAGAAAAT AAGCTAAATA TTTTCTGGAA ATTTCTGTTC 6762
1400
1401 ATTCATTAAG GCCCATCCTT TCCCCACTC TATAGAAGTG TTGTCCACTT GCACAATTTT 6822
1402
1403 TTCCAGGAAA GAATCTCTCT AACTCCTTCA GCTCACATGC TTTGGACCAC ACAGGGAAGA 6882
1404
1405 CTTTGATTGT GTAATGCCCT CAGAAGCTCT CTTTCTTGCC ACTACCACAC TGATTTGAGG 6942
1406
1407 AAGAAAATCC CTTTAGCACC TAACCCTTCA GGTGCTATGA GTGGCTAATG GAACTGTACC 7002
1408
1409 TCCTTCAAGT TTTGTGCAAT AATTAAGGGT CACTCACTGT CAGATACTTT CTGTGATCTA 7062
1410
1411 TGATAATGTG TGTGCAACAC ATAACATTTT AATAAAAGTA GAAAATATGA AATTAGAGTC 7122
1412
1413 ATCTACACAT CTGGATTTGA TCTTAGAATG AAACAAGCAA AAAAGCATCC AAGTGAGTGC 7182
1414
1415 AATTATTAGT TTTTCAGAGT GCTTCAAAGG CTTCTAGGCC CATCCCGGGA AGTGTTAATG 7242
1416
1417 AGCTGTGGAC TGGTTCACAT ATCTATTGCC TCTTGCCAGA TTTGCAAAAA ACTTCACTCA 7302
1418
1419 ATGAGCAAAT TTCAGCCTTA AGAAACAAAG TCAAAAATTC CAAGGAAGCA TCCTACGAAA 7362
1420
1421 GAGGGAACCT CTGAGATCCC TGAGGAGGGT CAGCATGTGA TGGTTGTATT TCCTTCTTCT 7422
1422
1423 CAG T ACT GCA GAC TAT GCC ATG TTC AAG GTG GGA CCT GAA GCT GAC 7468
1424 Thr Ala Asp Tyr Ala Met Phe Lys Val Gly Pro Glu Ala Asp
1425 285 290 295
1426
1427 AAG TAC CGC CTA ACA TAT GCC TAC TTC GCT GGT GGG GAT GCT GGA GAT 7516
1428 Lys Tyr Arg Leu Thr Tyr Ala Tyr Phe Ala Gly Gly Asp Ala Gly Asp

RAW SEQUENCE LISTING PATENT APPLICATION US/08/206,176

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1429	300	305	310	
1430				
1431	GCC TTT GAT GGC TTT GAT TTT GGC GAT GAT CCT AGT GAC AAG TTT TTC			7564
1432	Ala Phe Asp Gly Phe Asp Phe Gly Asp Asp Pro Ser Asp Lys Phe Phe			
1433	315	320	325	330
1434				
1435	ACA TCC CAT AAT GGC ATG CAG TTC AGT ACC TGG GAC AAT GAC AAT GAT			7612
1436	Thr Ser His Asn Gly Met Gln Phe Ser Thr Trp Asp Asn Asp Asn Asp			
1437		335	340	345
1438				
1439	AAG TTT GAA GGC AAC TGT GCT GAA CAG GAT GGA TCT GGT TGG TGG ATG			7660
1440	Lys Phe Glu Gly Asn Cys Ala Glu Gln Asp Gly Ser Gly Trp Trp Met			
1441		350	355	360
1442				
1443	AAC AAG TGT CAC GCT GGC CAT CTC AAT GGA GTT TAT TAC CAA G			7703
1444	Asn Lys Cys His Ala Gly His Leu Asn Gly Val Tyr Tyr Gln			
1445		365	370	375
1446				
1447	GTATGTTTTTC CTTTCTTAGA TTCCAAGTTA ATGTATAGTG TATACTATTT TCATAAAAAA			7763
1448				
1449	TAATAAATAG ATATGAAGAA ATGAAGAATA ATTTATAAAG ATAGTAGGGA TTTTATCATG			7823
1450				
1451	TTCTTTATTT CAACTAAGTT CTTTGAAACT GGAAGTGGAT AATACCAAGT TCATGCCTAA			7883
1452				
1453	AATTAGCCCT TCTAAAGAAA TCCACCTGCT GCAAATATC CAGTAGTTTG GCATTATATG			7943
1454				
1455	TGAAACTATC ACCATCATAG CTGGCACTGT GGGTTGTGGG ATCTCCTTTA GACATACAAC			8003
1456				
1457	ATAAATGATC TGGATGGATT AACATTACTA CATGGATGCT TGTTGACACA TTAACCTGGC			8063
1458				
1459	TTCCCATGAG CTTTGTGTCA GATACACGCA GTGAACAGGT GTTTGGAGGA ACAGAATAAA			8123
1460				
1461	GAGAAGGCAA GCACTGGTAA GGGCAGGGGT TTGTGAAAGC TTGAGAGAAG AGACCAGTCT			8183
1462				
1463	GAGGACAGTA GACACTTATT TTAGGATGGG GGTTGGATGA GGAGGCTATA GTTTGCTATA			8243
1464				
1465	AGCTTGAAT GGTTTGGAAC ACTGGTTTCA CTCACCTACC CAGCAGTTAT GTGTGGGGAA			8303
1466				
1467	GCCTTACCGA TGCTAAAGGA TCCATGTTAC AATAATGGCA TTATTTGGAA ATCCCAGTGG			8363
1468				
1469	TATTCCATGA ATAAAACCAC TATGAAGATA ATCCCACTCA ACAGACTCTC CGTTGGAGAA			8423
1470				
1471	GGACAGCAAC ACCACCCTGG GAAAGCCAAA CAGTCAGACC AGACCTGTTT AGCATCAGTA			8483
1472				
1473	GGACTTCCCT ACCATATCTG CTGGGTAGAT GAGTGAAACC AGTGTTCCAA ACCACTCCGG			8543
1474				
1475	GCTTGTAGCA AACCATAGTC TCCTCATCTA CCAAGATGAG CAACCTTACC TCCTGATGTC			8603
1476				
1477	CTAGCCAATC ACCAACTAGG AAACTTTGCA CAGTTTATTT AAAGTAACAG TTTGATTTTC			8663
1478				
1479	ACAATATTTT TAAATTGGAG AAACATAACT TATCTTTGCA CTCACAAACC ACATAATGAG			8723

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1480																	
1481	AAGAACTCT	AAGGGAAAAT	GCTTGATCTG	TGTGACCCGG	GGCGCCATGC	CAGAGCTGTA											8783
1482																	
1483	GTTTCATGCCA	GTGTTGTGCT	CTGACAAGCC	TTTTACAGAA	TTACATGAGA	TCTGCTTCCC											8843
1484																	
1485	TAGGACAAGG	AGAAGGCAAA	TCAACAGAGG	CTGCACTTTA	AAATGGAGAC	ATAAAATAAC											8903
1486																	
1487	ATGCCAGAAC	CATTTTCCTAA	AGCTCCTCAA	TCAACCAACA	AAATTGTGCT	TTCAAATAAC											8963
1488																	
1489	CTGAGTTGAC	CTCATCAGGA	ATTTTGTGGC	TCCTTCTCTT	CTAACCTGCC	TGAAGAAAGA											9023
1490																	
1491	TGGTCCACAG	CAGCTGAGTC	CGGGATGGAT	AAGCTTAGGG	ACAGAGGCCA	ATTAGGGAAC											9083
1492																	
1493	TTTGGGTTTC	TAGCCCTACT	AGTAGTGAAT	AAATTTAAAG	TGTGGATGTG	ACTATGAGTC											9143
1494																	
1495	ACAGCACAGA	TGTTGTTTTAA	TAATATGTTT	ATTTTATAAA	TTGATATTTT	AGGAATCTTT											9203
1496																	
1497	GGAGATATTT	TCAGTTAGCA	GATAATACTA	TAAATTTTAT	GTAACCTGGCA	ATGCACTTCG											9263
1498																	
1499	TAATAGACAG	CTCTTCATAG	ACTTGCAGAG	GTAAAAAGAT	TCCAGAATAA	TGATATGTAC											9323
1500																	
1501	ATCTACGACT	TGTTTTAG	GT GGC ACT	TAC TCA AAA	GCA TCT ACT	CCT AAT											9373
1502				Gly Gly Thr	Tyr Ser Lys	Ala Ser Thr	Pro Asn										
1503				380				385									
1504																	
1505	GGT TAT GAT AAT	GGC ATT ATT	TGG GCC ACT	TGG AAA ACC	CGG TGG TAT												9421
1506	Gly Tyr Asp Asn	Gly Ile Ile	Trp Ala Thr	Trp Lys Thr	Arg Trp Tyr												
1507	390			395			400										
1508																	
1509	TCC ATG AAG AAA	ACC ACT ATG	AAG ATA ATC	CCA TTC AAC	AGA CTC ACA												9469
1510	Ser Met Lys Lys	Thr Thr Met	Lys Ile Ile	Pro Phe Asn	Arg Leu Thr												
1511	405			410			415										
1512																	
1513	ATT GGA GAA GGA	CAG CAA CAC	CAC CTG GGG	GGA GCC AAA	CAG GTC AGA												9517
1514	Ile Gly Glu Gly	Gln Gln His	His Leu Gly	Gly Ala Lys	Gln Val Arg												
1515	420			425			430			435							
1516																	
1517	CCA GAG CAC CCT	GCG GAA ACA	GAA TAT GAC	TCA CTT TAC	CCT GAG GAT												9565
1518	Pro Glu His Pro	Ala Glu Thr	Glu Tyr Asp	Ser Leu Tyr	Pro Glu Asp												
1519	440			445			450										
1520																	
1521	GAT TTG TAGAAAATTA	ACTGCTAACT	TCTATTGACC	CACAAAGTTT	CAGAAATTCT												9621
1522	Asp Leu																
1523																	
1524																	
1525	CTGAAAGTTT	CTTCCTTTTT	TCTCTTACTA	TATTTATTGA	TTTCAAGTCT	TCTATTAAGG											9681
1526																	
1527	ACATTTAGCC	TTCAATGGAA	ATTAAAACTC	ATTTAGGACT	GTATTTCCAA	ATTACTGATA											9741
1528																	
1529	TCAGAGTTAT	TTAAAAATTG	TTTATTTGAG	GAGATAACAT	TTCAACTTTG	TTCCTAAATA											9801
1530																	

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/206,176DATE: 03/23/94
TIME: 15:03:29

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1531 TATAATAATA AAATGATTGA CTTTATTTGC ATTTTATGA CCACTTGTCA TTTATTTTGT 9861
1532
1533 CTTCGTAAAT TATTTTCATT ATATCAAATA TTTTAGTATG TACTTAATAA AATAGGAGAA 9921
1534
1535 CATTTTAGAG TTTCAAATTC CCAGGTATTT TCCTTGTTTA TTACCCCTAA ATCATTCCTA 9981
1536
1537 TTTAATTCTT CTTTTTAAAT GGAGAAAATT ATGTCTTTTT AATATGGTTT TTGTTTTGTT 10041
1538
1539 ATATATTCAC AGGCTGGAGA CGTTTAAAAG ACCGTTTCAA AAGAGATTTA CTTTTTTAAA 10101
1540
1541 GGACTTTATC TGAACAGAGA GATATAATAT TTTTCCTATT GGACAATGGA CTTGCAAAGC 10161
1542
1543 TTCACTTCAT TTTAAGAGCA AAAGACCCCA TGTTGAAAAC TCCATAACAG TTTTATGCTG 10221
1544
1545 ATGATAATTT ATCTACATGC ATTTCAATAA ACCTTTTGTT TCCTAAGACT AGATACATGG 10281
1546
1547 TACCTTTATT GACCATTAAA AAACCACCAC TTTTGGCCAA TTTACCAATT ACAATTGGGC 10341
1548
1549 AACCATCAGT AGTAATTGAG TCCTCATTTT ATGCTAAATG TTATGCCTAA CTCTTTGGGA 10401
1550
1551 GTTACAAAGG AAATAGCAAT TATGGCTTTT GCCCTCTAGG AGATACAGGA CAAATACAGG 10461
1552
1553 AAAATACAGC AACCCAACT GACAATACTC TATACAAGAA CATAATCACT AAGCAGGAGT 10521
1554
1555 CACAGCCACA CAACCAAGAT GCATAGTATC CAAAGTGCAG CTG 10564
1556
1557

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 453 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

1569 Met Ser Trp Ser Leu His Pro Arg Asn Leu Ile Leu Tyr Phe Tyr Ala
1570 1 5 10 15
1571
1572 Leu Leu Phe Leu Ser Ser Thr Cys Val Ala Tyr Val Ala Thr Arg Asp
1573 20 25 30
1574
1575 Asn Cys Cys Ile Leu Asp Glu Arg Phe Gly Ser Tyr Cys Pro Thr Thr
1576 35 40 45
1577
1578 Cys Gly Ile Ala Asp Phe Leu Ser Thr Tyr Gln Thr Lys Val Asp Lys
1579 50 55 60
1580
1581 Asp Leu Gln Ser Leu Glu Asp Ile Leu His Gln Val Glu Asn Lys Thr

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1582	65				70				75				80			
1583																
1584	Ser	Glu	Val	Lys	Gln	Leu	Ile	Lys	Ala	Ile	Gln	Leu	Thr	Tyr	Asn	Pro
1585					85				90				95			
1586																
1587	Asp	Glu	Ser	Ser	Lys	Pro	Asn	Met	Ile	Asp	Ala	Ala	Thr	Leu	Lys	Ser
1588					100				105				110			
1589																
1590	Arg	Ile	Met	Leu	Glu	Glu	Ile	Met	Lys	Tyr	Glu	Ala	Ser	Ile	Leu	Thr
1591					115				120				125			
1592																
1593	His	Asp	Ser	Ser	Ile	Arg	Tyr	Leu	Gln	Glu	Ile	Tyr	Asn	Ser	Asn	Asn
1594					130				135				140			
1595																
1596	Gln	Lys	Ile	Val	Asn	Leu	Lys	Glu	Lys	Val	Ala	Gln	Leu	Glu	Ala	Gln
1597	145				150				155				160			
1598																
1599	Cys	Gln	Glu	Pro	Cys	Lys	Asp	Thr	Val	Gln	Ile	His	Asp	Ile	Thr	Gly
1600					165				170				175			
1601																
1602	Lys	Asp	Cys	Gln	Asp	Ile	Ala	Asn	Lys	Gly	Ala	Lys	Gln	Ser	Gly	Leu
1603					180				185				190			
1604																
1605	Tyr	Phe	Ile	Lys	Pro	Leu	Lys	Ala	Asn	Gln	Gln	Phe	Leu	Val	Tyr	Cys
1606					195				200				205			
1607																
1608	Glu	Ile	Asp	Gly	Ser	Gly	Asn	Gly	Trp	Thr	Val	Phe	Gln	Lys	Arg	Leu
1609	210				215				220							
1610																
1611	Asp	Gly	Ser	Val	Asp	Phe	Lys	Lys	Asn	Trp	Ile	Gln	Tyr	Lys	Glu	Gly
1612	225				230				235				240			
1613																
1614	Phe	Gly	His	Leu	Ser	Pro	Thr	Gly	Thr	Thr	Glu	Phe	Trp	Leu	Gly	Asn
1615					245				250				255			
1616																
1617	Glu	Lys	Ile	His	Leu	Ile	Ser	Thr	Gln	Ser	Ala	Ile	Pro	Tyr	Ala	Leu
1618					260				265				270			
1619																
1620	Arg	Val	Glu	Leu	Glu	Asp	Trp	Asn	Gly	Arg	Thr	Ser	Thr	Ala	Asp	Tyr
1621	275				280				285							
1622																
1623	Ala	Met	Phe	Lys	Val	Gly	Pro	Glu	Ala	Asp	Lys	Tyr	Arg	Leu	Thr	Tyr
1624	290				295				300							
1625																
1626	Ala	Tyr	Phe	Ala	Gly	Gly	Asp	Ala	Gly	Asp	Ala	Phe	Asp	Gly	Phe	Asp
1627	305				310				315				320			
1628																
1629	Phe	Gly	Asp	Asp	Pro	Ser	Asp	Lys	Phe	Phe	Thr	Ser	His	Asn	Gly	Met
1630					325				330				335			
1631																
1632	Gln	Phe	Ser	Thr	Trp	Asp	Asn	Asp	Asn	Asp	Lys	Phe	Glu	Gly	Asn	Cys

INPUT SET: S2548.raw

1633	340	345	350	
1634				
1635	Ala Glu Gln Asp Gly Ser Gly Trp Trp Met Asn Lys Cys His Ala Gly			
1636	355	360	365	
1637				
1638	His Leu Asn Gly Val Tyr Tyr Gln Gly Gly Thr Tyr Ser Lys Ala Ser			
1639	370	375	380	
1640				
1641	Thr Pro Asn Gly Tyr Asp Asn Gly Ile Ile Trp Ala Thr Trp Lys Thr			
1642	385	390	395	400
1643				
1644	Arg Trp Tyr Ser Met Lys Lys Thr Thr Met Lys Ile Ile Pro Phe Asn			
1645	405	410	415	
1646				
1647	Arg Leu Thr Ile Gly Glu Gly Gln Gln His His Leu Gly Gly Ala Lys			
1648	420	425	430	
1649				
1650	Gln Val Arg Pro Glu His Pro Ala Glu Thr Glu Tyr Asp Ser Leu Tyr			
1651	435	440	445	
1652				
1653	Pro Glu Asp Asp Leu			
1654	450			
1655				
1656	(2) INFORMATION FOR SEQ ID NO:7:			
1657				
1658	(i) SEQUENCE CHARACTERISTICS:			
1659	(A) LENGTH: 10807 base pairs			
1660	(B) TYPE: nucleic acid			
1661	(C) STRANDEDNESS: double			
1662	(D) TOPOLOGY: linear			
1663				
1664				
1665	(vii) IMMEDIATE SOURCE:			
1666	(B) CLONE: ovine beta-lactoglobulin			
1667				
1668				
1669	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:			
1670				
1671	ACGCGTGTCTG ACCTGCAGGT CAACGGATCT CTGTGTCTGT TTTCATGTTA GTACCACACT	60		
1672				
1673	GTTTTGGTGG CTGTAGCTTT CAGCTACAGT CTGAAGTCAT AAAGCCTGGT ACCTCCAGCT	120		
1674				
1675	CTGTTCTCTC TCAAGATTGT GTTCTGCTGT TTGGGTCTTT AGTGTCTCCA CACAATTTTT	180		
1676				
1677	AGAATTGTTT GTTCTAGTTC TGTGAAAAAT GATGCTGGTA TTTTGATAAG GATTGCATTG	240		
1678				
1679	AATCTGTAAA GCTACAGATA TAGTCATTGG GTAGTACAGT CACTTTAACA ATATTAAGTC	300		
1680				
1681	TTCACATCTG TGAGCATGAT ATATTTTCCC CCTCTATATC ATCTTCAATT CCTCCTATCA	360		
1682				
1683	GTTTCTTTCA TTGCAGTTTT CTGAGTACAG GTCTTACACC TCCTTGGTTA GAGTCATTCC	420		

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1684								
1685	TCAGTATTTT	ATTCTTTTGA	TACAATTGTG	AATGAGGTAA	TTTTCTTAGT	TTCTCTTTCT		480
1686								
1687	GATAGCTCAT	TGTTAGTGTA	TATATAGAAA	AGCAACAGAT	TTCTATGTAT	TAATTTTGTA		540
1688								
1689	TCCTGCAACA	GATTTCTATG	TATTAATTTT	GTATCCTGCT	ACTTTACGGA	ATTCAC TTAT		600
1690								
1691	TAGCTTTTTG	GTGACATCTT	GAGGATTTTC	TGAAGAAAAT	GGCATGGTAT	GGTAGGACAA		660
1692								
1693	GGTGTCATGT	CATCTGCAAA	CAGTGGCAGT	TTTCCTTCTT	CCCTTCCAAC	CTGGATTTCT		720
1694								
1695	TTGATTTCTT	TCTGTCTGAG	TACGACTAGG	ATTCCCAATA	CTATACCGAA	TAAAAGTGGC		780
1696								
1697	AAGAGTGGAC	ATCCTTGTCT	TATTTTTCTG	ACCTTAGAGG	AAATGCTTTC	AGTTTTTTCAC		840
1698								
1699	CATTAATTAT	AATGTTTACT	GTGGGCTTGT	CATATGTGGC	CTTCATTATA	TGGAGGTCTA		900
1700								
1701	TTCCCTCTAT	ACCCACCTTG	TTGAGAGTTT	TTATCATAAA	AGTATGTTGA	ATTTTGTCAA		960
1702								
1703	AAGTTTTTCC	TGCATCTATT	GAGATGATTT	TTACTCTTCA	ATTCATTAAT	GATTTTTTATT		1020
1704								
1705	CTTCATTTTG	TTAATGATTT	CCATTCTTCA	ATTTGTTAAC	GTGGTATATC	ACATTGATTG		1080
1706								
1707	ATTTGTGGAT	ACCTTTGTAT	CCCTGGGATA	AACCTCACTT	GATCATGAGC	TTTCAATGTA		1140
1708								
1709	TTTTTTGAATT	CACTTTGCTA	ATATTCTGTT	GGGTATTTTT	GCATCTCTAT	TCATCAATGA		1200
1710								
1711	TATTGGCCTA	AGAAAGGTTT	TGTCTGGTTT	TAGTATCAGG	GTGATGCTGG	CCTCATAGAG		1260
1712								
1713	AGAGTTTAGA	AGCATTTCTT	CCTCTTTGAT	TTTTCGGAAT	AGTTTGAGTA	GGATAGGTAT		1320
1714								
1715	TAACTCTTCT	TTAAATGTTT	GGGGACTTCC	CTGGTGAGCC	GGTGGTTGAG	AATCCGCCTC		1380
1716								
1717	AGGGATGTGG	GTTTGATCCC	TGGTCAGGGA	ACCATTAATA	AGATCCCACA	TGCTGCAGGC		1440
1718								
1719	AACAAGCCCC	CAAGCTGCAA	CCACTGAGCT	GCAACCGCTG	CAGTGCCAC	AGGCCACGAC		1500
1720								
1721	CAGAGAAAGC	CCACATACAG	CAGGGAAGAC	CCAGCACAAC	CGGAAAAGG	AGTTTGGTGG		1560
1722								
1723	AATACAGCTG	TGAAGCCGTC	TGGTCCTGGA	CTCCTGCTTG	AGGGAATTTT	TTAAAAATTA		1620
1724								
1725	TTGATTCAAT	TTCATTACTG	GTAAGTGGTC	TGTTTCATATT	TTCTATTTCT	TCCGGGTTCA		1680
1726								
1727	GTCTTGGGAG	ATTGTACATG	CCTAGGAATG	TGTCCGTTTC	TTCTAGGTTG	TCCATTTTAT		1740
1728								
1729	TGGACATGCA	TGGGAGCACA	CAGCACCGAC	CAGCGAGACT	CATGCTGGCT	TCCTGGGGCC		1800
1730								
1731	AGGCTGGGGC	CCCAAGCAGC	ATGGCATCCT	AGAGTGTGTG	AAAGCCCACT	GACCCTGCCC		1860
1732								
1733	AGCCCCACAA	TTTCATTCTG	AGAAGTGATT	CCTTGCTTCT	GCACTTACAG	GCCCAGGATC		1920
1734								

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/206,176DATE: 03/23/94
TIME: 15:03:57

INPUT SET: S2548.raw

1735	TGACCTGCTT	CTGAGGAGCA	GGGGTTTTGG	CAGGACGGGG	AGATGCTGAG	AGCCGACGGG	1980
1736							
1737	GGTCCAGGTC	CCCTCCCAGG	CCCCCTGTG	TGGGGCAGCC	CTTGGGAAAG	ATTGCCCCAG	2040
1738							
1739	TCTCCCTCCT	ACAGTGGTCA	GTCCCAGCTG	CCCCAGGCCA	GAGCTGCTTT	ATTTCCGTCT	2100
1740							
1741	CTCTCTCTGG	ATGGTATTCT	CTGGAAGCTG	AAGGTTCTCTG	AAGTTATGAA	TAGCTTTGCC	2160
1742							
1743	CTGAAGGGCA	TGGTTTGTGG	TCACGGTTCA	CAGGAACCTG	GGAGACCCTG	CAGCTCAGAC	2220
1744							
1745	GTCCCGAGAT	TGGTGGCACC	CAGATTTCT	AAGCTCGCTG	GGGAACAGGG	CGCTTGTTTC	2280
1746							
1747	TCCCTGGCTG	ACCTCCCTCC	TCCCTGCATC	ACCCAGTTCT	GAAAGCAGAG	CGGTGCTGGG	2340
1748							
1749	GTCACAGCCT	CTCGCATCTA	ACGCCGGTGT	CCAAACCACC	CGTGCTGGTG	TTCGGGGGGC	2400
1750							
1751	TACCTATGGG	GAAGGGCTTC	TCACTGCAGT	GGTGCCCCCC	GTCCCTCTG	AGATCAGAAG	2460
1752							
1753	TCCCAGTCCG	GACGTCAAAC	AGGCCGAGCT	CCCTCCAGAG	GCTCCAGGGA	GGGATCCTTG	2520
1754							
1755	CCCCCCCCGCT	GCTGCCTCCA	GCTCCTGGTG	CCGCACCCTT	GAGCCTGATC	TTGTAGACGC	2580
1756							
1757	CTCAGTCTAG	TCTCTGCCTC	CGTGTTTACA	CGCCTTCTCC	CCATGTCCCC	TCCGTGTCCC	2640
1758							
1759	CGTTTTCTCT	CACAAGGACA	CCGGACATTA	GATTAGCCCC	TGTTCCAGCC	TCACCTGAAC	2700
1760							
1761	AGCTCACATC	TGTAAAGACC	TAGATTCCAA	ACAAGATTCC	AACCTGAAGT	TCCCGGTGGA	2760
1762							
1763	TGTGAGTTCT	GGGGCGACAT	CCTTCAAACC	CATCACAGCT	TGCAGTTCAT	CGCAAAACAT	2820
1764							
1765	GGAACCTGGG	GTTTATCGTA	AAACCCAGGT	TCTTCATGAA	AACTGAGCT	TCGAGGCTTG	2880
1766							
1767	TTGCAAGAAT	TAAAGGTGCT	AATACAGATC	AGGGCAAGGA	CTGAAGCTGG	CTAAGCCTCC	2940
1768							
1769	TCTTTCCATC	ACAGGAAAGG	GGGGCCTGGG	GGCGGCTGGA	GGTCTGCTCC	CGTGAGTGAG	3000
1770							
1771	CTCTTTCTCTG	CTACAGTCAC	CAACAGTCTC	TCTGGGAAGG	AAACCAGAGG	CCAGAGAGCA	3060
1772							
1773	AGCCGGAGCT	AGTTTAGGAG	ACCCCTGAAC	CTCCACCCAA	GATGCTGACC	AGCCAGCGGG	3120
1774							
1775	CCCCCTGGAA	AGACCCTACA	GTTTCAGGGG	GAAGAGGGGC	TGACCCGCCA	GGTCCCTGCT	3180
1776							
1777	ATCAGGAGAC	ATCCCCGCTA	TCAGGAGATT	CCCCACCTT	GCTCCCGTTC	CCCTATCCCA	3240
1778							
1779	ATACGCCAC	CCCACCCCTG	TGATGAGCAG	TTTAGTCACT	TAGAATGTCA	ACTGAAGGCT	3300
1780							
1781	TTTGCATCCC	CTTTGCCAGA	GGCACAAGGC	ACCCACAGCC	TGCTGGGTAC	CGACGCCCCAT	3360
1782							
1783	GTGGATTGAG	CCAGGAGGCC	TGTCCTGCAC	CCTCCCTGCT	CGGGCCCCCT	CTGTGCTCAG	3420
1784							
1785	CAACACACCC	AGCACCAGCA	TTCCCGCTGC	TCCTGAGGTC	TGCAGGCAGC	TCGCTGTAGC	3480

1786								
1787	CTGAGCGGTG	TGGAGGGAAG	TGTCCTGGGA	GATTTAAAAT	GTGAGAGGCG	GGAGGTGGGA		3540
1788								
1789	G GTTGGGCCC	TGTGGGCCTG	CCCATCCCAC	GTGCCTGCAT	TAGCCCCAGT	GCTGCTCAGC		3600
1790								
1791	CGTGCCCCCG	CCGCAGGGGT	CAGGTCACTT	TCCCGTCTCTG	GGGTTATTAT	GACTCTTGTC		3660
1792								
1793	ATTGCCATTG	CCATTTTTTG	TACCCTAACT	GGGCAGCAGG	TGCTTG CAGA	GCCCTCGATA		3720
1794								
1795	CCGACCAGGT	CCTCCCTCGG	AGCTCGACCT	GAACCCCATG	TCACCCTTGC	CCCAGCCTGC		3780
1796								
1797	AGAGGGTG GG	TGACTGCAGA	GATCCCTTCA	CCCAAGGCCA	CGGTCACATG	GTTTG GAGGA		3840
1798								
1799	GCTGGTGCCC	AAGGCAGAGG	CCACCCTCCA	GGACACACCT	GTCCCCAGTG	CTGGCTCTGA		3900
1800								
1801	CCTGTCTTTG	TCTAAGAGGC	TGACCCCGGA	AGTGTTCTCTG	GCACTGGCAG	CCAGCCTGGA		3960
1802								
1803	CCCAGAGTCC	AGACACCCAC	CTGTGCCCCC	GCTTCTGGGG	TCTACCAGGA	ACCGTCTAGG		4020
1804								
1805	CCCAGAGGGG	ACTTCTTGCT	TGGCCTTGGA	TGGAAGAAGG	CCTCCTATTG	TCCTCGTAGA		4080
1806								
1807	GGAAGCCACC	CCGGGGCCTG	AGGATGAGCC	AAGTGGGATT	CCGGGAACCG	CGTGGCTGGG		4140
1808								
1809	GGCCCAGCCC	GGGCTGGCTG	GCCTGCATGC	CTCCTGTATA	AGGCCCAAG	CCTGCTGTCT		4200
1810								
1811	CAGCCCTCCA	CTCCCTGCAG	AGCTCAGAAG	CACGACCCCA	GGGATATCCC	TGCAGCCATG		4260
1812								
1813	AAGTGCCTCC	TGCTTGCCCT	GGGCCTGGCC	CTCGCCTGTG	GCGTCCAGGC	CATCATCGTC		4320
1814								
1815	ACCCAGACCA	TGAAAGGCCT	GGACATCCAG	AAGGTTCGAG	GGTTGGCCGG	GTGGGTGAGT		4380
1816								
1817	TGCAGGGCGG	GCAGGGGAGC	TGGGCCTCAG	AGAGCCAAGA	GAGGCTGTGA	CGTTGGGTTC		4440
1818								
1819	CCATCAGTCA	GCTAGGGCCA	CCTGACAAAT	CCCCGCTGGG	GCAGCTTCAA	CCAGGCGTTC		4500
1820								
1821	ACTGTCTTGC	ATTCTGGAGG	CTGGAAGCCC	AAGATCCAGG	TGTTGGCAGG	GCTGGCTTCT		4560
1822								
1823	CCTGCGGCCG	CTCTCTGGGG	AGCAGACGGC	CGTCTTCTCC	AGTCCTCTGC	GCGCCCTGAT		4620
1824								
1825	TTCTCTTTCC	TGTGAGGCCA	CCAGGCCTGC	TGGAACACG	CCTGCCTGCG	CAGCTTCACA		4680
1826								
1827	CGACCTTTGT	CATCTCTTTA	AAGGCCATGT	CTCCAGAGTC	ATGTGTTGAA	GTTCTGGGGG		4740
1828								
1829	TTAGTGGGAC	ACAGTTCAGC	CCCTAAAAGA	GTCTCTCTGC	CCCTCAAATT	TTCCCCACCT		4800
1830								
1831	CCAGCCATGT	CTCCCCAAGA	TCCAAATGTT	GCTACATGTG	GGGGGGCTCA	TCTGGGTCCC		4860
1832								
1833	TCTTTGGGTT	CAGTGTGAGT	CTGGGGAGAG	CATTCCCCAG	GGTGCAGAGT	TGGGGGGAGT		4920
1834								
1835	ATCTCAGGGC	TGCCCAGGCC	GGGGTGGGAC	AGAGAGCCCA	CTGTGGGGCT	GGGGGCCCT		4980
1836								

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1837	TCCCACCCCC	AGAGTGCAAC	TCAAGGTCCC	TCTCCAGGTG	GCGGGGACTT	GGCACTCCTT	5040
1838							
1839	GGCTATGGCG	GCCAGCGACA	TCTCCCTGCT	GGATGCCCAG	AGTGCCCCCC	TGAGAGTGTA	5100
1840							
1841	CGTGGAGGAG	CTGAAGCCCA	CCCCCGAGGG	CAACCTGGAG	ATCCTGCTGC	AGAAATGGTG	5160
1842							
1843	GGCGTCTCTC	CCCAACATGG	AACCCCCACT	CCCCAGGGCT	GTGGACCCCC	CGGGGGGTGG	5220
1844							
1845	GGTGCAGGAG	GGACCAGGGC	CCCAGGGCTG	GGGAAGAGGG	CTCAGAGTTT	ACTGGTACCC	5280
1846							
1847	GGCGCTCCAC	CCAAGGCTGC	CCACCCAGGG	CTTTTTTTTT	TTTTTAACTT	TTATTAATTT	5340
1848							
1849	GATGCTTCAG	AACATCATCA	AACAAATGAA	CATAAAACAT	TCATTTTTGT	TTACTTGGA	5400
1850							
1851	GGGGAGATAA	AATCCTCTGA	AGTGGAATG	CATAGCAAAG	ATACATACAA	TGAGGCAGGT	5460
1852							
1853	ATTCTGAATT	CCCTGTTAGT	CTGAGGATTA	CAAGTGTATT	TGAGCAACAG	AGAGACATTT	5520
1854							
1855	TCATCATTTT	TAGTCTGAAC	ACCTCAGTAT	CTAAAATGAA	CAAGAAGTCC	TGGAAACGAA	5580
1856							
1857	GCAGTGTGGG	GATAGGCCCG	TGTGAAGGCT	GCTGGGAGGC	AGCAGACCTG	GGTCTTCGGG	5640
1858							
1859	CTCAAGCAGT	TCCCGCTACC	AGCCCTGTCC	ACCTCAGACG	GGGGTCAGGG	TGCAGGAGAG	5700
1860							
1861	AGCTGGATGG	GTGTGGGGGC	AGAGATGGGG	ACCTGAACCC	CAGGGCTGCC	TTTTGGGGGT	5760
1862							
1863	GCCTGTGGTC	AAGGCTCTCC	CTGACCTTTT	CTCTCTGGCT	TCATCTGACT	TCTCCTGGCC	5820
1864							
1865	CATCCACCCG	GTCCCCTGTG	GCCTGAGGTG	ACAGTGAGTG	CGCCGAGGCT	AGTTGGCCAG	5880
1866							
1867	CTGGCTCCTA	TGCCCATGCC	ACCCCCCTCC	AGCCCTCCTG	GGCCAGCTTC	TGCCCCTGGC	5940
1868							
1869	CCTCAGTTCA	TCCTGATGAA	AATGGTCCAT	GCCAATGGCT	CAGAAAGCAG	CTGTCTTTCA	6000
1870							
1871	GGGAGAACGG	CGAGTGTGCT	CAGAAGAAGA	TTATTGCAGA	AAAAACCAAG	ATCCCTGCGG	6060
1872							
1873	TGTTCAAGAT	CGATGGTGAG	TCCGGGTCCC	TGGGGGACAC	CCACCACCCC	CGCCCCCGGG	6120
1874							
1875	GA CTGTGGAC	AGGTTCAGGG	GGCTGGCGTC	GGGCCCTGGG	ATGCTAAGGG	ACTGGTGGTG	6180
1876							
1877	ATGAAGACAC	TGCCTTGACA	CCTGCTTCAC	TTGCCTCCCC	TGCCACCTGC	CCGGGGCCTT	6240
1878							
1879	GGGGCGGTGG	CCATGGGCAG	GTCCCGGCTG	GCGGGCTAAC	CCACCAGGGT	GACACCCGAG	6300
1880							
1881	CTCTCTTTGC	TGGGGGGCGG	GCGGTGCTCT	GGGCCCTCAG	GCTGAGCTCA	GGAGGTACCT	6360
1882							
1883	GTGCCCTCCC	AGGGGTAAAC	GAGAGCCGTT	GCCCACTCCA	GGGGCCCAGG	TGCCCCACGA	6420
1884							
1885	CCCCAGCCCG	CTCCACAGCT	CCTTCATCTC	CTGGAGACAA	ACTCTGTCCG	CCCTCGCTCA	6480
1886							
1887	TTCATTGTG	CGTCCTAAAT	CCGAGATGAT	AAAGCTTCGA	GGGGGGGTG	GGGTTCATC	6540

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1888							
1889	AGGGCTGCCC	TTCCGCCGGG	CAGCCTGGGC	CACATCTGCC	CTTGGCCCCC	TCAGGACTCA	6600
1890							
1891	CTCTGACTGG	AGGCCCTGCA	CTGACTGACG	CCAGGGTGCC	CAGCCCAGGG	TCTCTGGCGC	6660
1892							
1893	CATCCAGCTG	CACTGGGTTT	GGGTGCTGGT	CCTGCCCCCA	AGCTGCCCCG	ACACCACAGG	6720
1894							
1895	CAGCCGGGGC	TGCCCCACTGG	CCTCGGTCAG	GGTGAGCCCC	AGCTGCCCCC	GCTCAGGGCT	6780
1896							
1897	TGCCCCGACA	ATGACCCCAT	CCTCAGGACG	CACCCCCCTT	CCCTTGCTGG	GCAGTGTCCA	6840
1898							
1899	GCCCCACCCG	AGATCGGGGG	AAGCCCTATT	TCTTGACAAC	TCCAGTCCCT	GGGGGAGGGG	6900
1900							
1901	GCCTCAGACT	GAGTGGTGAG	TGTTCCCAAG	TCCAGGAGGT	GGTGGAGGGT	CCTGGCGGAT	6960
1902							
1903	CCAGAGTTGA	CAGTGAGGGC	TTCCTGGGCC	CCATGCGCCT	GGCAGTGGCA	GCAGGGAAGA	7020
1904							
1905	GGAAGCACCA	TTTCAGGGGT	GGGGGATGCC	AGAGGCGCTC	CCCACCCCGT	CTTCGCCGGG	7080
1906							
1907	TGGTGACCCC	GGGGGAGCCC	CGCTGGTCGT	GGAGGGTGCT	GGGGGCTGAC	TAGCAACCCC	7140
1908							
1909	TCCCCCCCCG	TTGGAActCA	CTTTTCTCCC	GTCTTGACCG	CGTCCAGCCT	TGAATGAGAA	7200
1910							
1911	CAAAGTCCTT	GTGCTGGACA	CCGACTACAA	AAAGTACCTG	CTCTTCTGCA	TGGA AAAACAG	7260
1912							
1913	TGCTGAGCCC	GAGCAAAGCC	TGGCCTGCCA	GTGCCTGGGT	GGGTGCCAAC	CCTGGCTGCC	7320
1914							
1915	CAGGGAGACC	AGCTGCGTGG	TCCTTGCTGC	AACAGGGGGT	GGGGGGTGGG	AGCTTGATCC	7380
1916							
1917	CCAGGAGGAG	GAGGGGTGGG	GGGTCCCTGA	GTCCCGCCAG	GAGAGAGTGG	TCGCATACCG	7440
1918							
1919	GGAGCCAGTC	TGCTGTGGGC	CTGTGGGTGG	CTGGGGACGG	GGGCCAGACA	CACAGGCCGG	7500
1920							
1921	GAGACGGGTG	GGCTGCAGAA	CTGTGACTGG	TGTGACCGTC	GCGATGGGGC	CGGTGGTCAC	7560
1922							
1923	TGAATCTAAC	AGCCTTTGTT	ACCGGGGAGT	TTCAATTATT	TCCCAAATA	AGAACTCAGG	7620
1924							
1925	TACAAAGCCA	TCTTTCAACT	ATCACATCCT	GAAAACAAAT	GGCAGGTGAC	ATTTTCTGTG	7680
1926							
1927	CCGTAGCAGT	CCCACTGGGC	ATTTTCAGGG	CCCCTGTGCC	AGGGGGGCGC	GGGCATCGGC	7740
1928							
1929	GAGTGGAGGC	TCCTGGCTGT	GTCAGCCGGC	CCAGGGGGAG	GAAGGGACCC	GGACAGCCAG	7800
1930							
1931	AGGTGGGGGG	CAGGCTTTCC	CCCTGTGACC	TGCAGACCCA	CTGCACTGCC	CTGGGAGGAA	7860
1932							
1933	GGGAGGGGAA	CTAGGCCAAG	GGGGAAGGGC	AGGTGCTCTG	GAGGGCAAGG	GCAGACCTGC	7920
1934							
1935	AGACCACCCT	GGGGAGCAGG	GACTGACCCC	CGTCCCTGCC	CCATAGTCAG	GACCCCGGAG	7980
1936							
1937	GTGGACAACG	AGGCCCTGGA	GAAATTCGAC	AAAGCCCTCA	AGGCCCTGCC	CATGCACATC	8040
1938							

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1939	CGGCTTGCCT	TCAACCCGAC	CCAGCTGGAG	GGTGAGCACC	CAGGCCCCGC	CCTTCCCCAG	8100
1940							
1941	GGCAGGAGCC	ACCCGGCCCC	GGGACGACCT	CCTCCCATGG	TGACCCCCAG	CTCCCCAGGC	8160
1942							
1943	CTCCCAGGAG	GAAGGGGTGG	GGTGCAGCAC	CCCGTGGGGG	CCCCCTCCCC	ACCCCCTGCC	8220
1944							
1945	AGGCCTCTCT	TCCCGAGGTG	TCCAGTCCCA	TCCTGACCCC	CCCATGACTC	TCCCTCCCCC	8280
1946							
1947	ACAGGGCAGT	GCCACGTCTA	GGTGAGCCCC	TGCCGGTGCC	TCTGGGGTAA	GCTGCCTGCC	8340
1948							
1949	CTGCCCCACG	TCCTGGGCAC	ACACATGGGG	TAGGGGGTCT	TGGTGGGGCC	TGGGACCCCA	8400
1950							
1951	CATCAGGCCC	TGGGGTCCCC	CCTGTGAGAA	TGGCTGGAAG	CTGGGGTCCC	TCCTGGCGAC	8460
1952							
1953	TGCAGAGCTG	GCTGGCCGCG	TGCCACTCTT	GTGGGTGACC	TGTGTCCTGG	CCTCACACAC	8520
1954							
1955	TGACCTCCTC	CAGCTCCTTC	CAGCAGAGCT	AAGGCTAAGT	GAGCCAGAAT	GGTACCTAAG	8580
1956							
1957	GGGAGGCTAG	CGGTCCTTCT	CCCGAGGAGG	GGCTGTCCTG	GAACCACCAG	CCATGGAGAG	8640
1958							
1959	GCTGGCAAGG	GTCTGGCAGG	TGCCCCAGGA	ATCACAGGGG	GGCCCCATGT	CCATTTCAGG	8700
1960							
1961	GCCCGGGAGC	CTTGGACTCC	TCTGGGGACA	GACGACGTCA	CCACCGCCCC	CCCCCATCA	8760
1962							
1963	GGGGGACTAG	AAGGGACCAG	GACTGCAGTC	ACCCTTCCTG	GGACCCAGGC	CCCTCCAGGC	8820
1964							
1965	CCCTCCTGGG	GCTCCTGCTC	TGGGCAGCTT	CTCCTTCACC	AATAAAGGCA	TAAACCTGTG	8880
1966							
1967	CTCTCCCTTC	TGAGTCTTTG	CTGGACGACG	GGCAGGGGGT	GGAGAAGTGG	TGGGGAGGGA	8940
1968							
1969	GTCTGGCTCA	GAGGATGACA	GCGGGGCTGG	GATCCAGGGC	GTCTGCATCA	CAGTCTTGTG	9000
1970							
1971	ACAAGTGGGG	GCCACACAC	ATCACTGCGG	CTCTTTGAAA	CTTTCAGGAA	CCAGGGAGGG	9060
1972							
1973	ACTCGGCAGA	GACATCTGCC	AGTTCACTTG	GAGTGTTTCA	TCAACACCCA	AACTCGACAA	9120
1974							
1975	AGGACAGAAA	GTGGAAAATG	GCTGTCTCTT	AGTCTAATAA	ATATTGATAT	GAAACTCAAG	9180
1976							
1977	TTGCTCATGG	ATCAATATGC	CTTTATGATC	CAGCCAGCCA	CTACTGTCGT	ATCAACTCAT	9240
1978							
1979	GTACCCAAAC	GCACTGATCT	GTCTGGCTAA	TGATGAGAGA	TTCCCAGTAG	AGAGCTGGCA	9300
1980							
1981	AGAGGTCACA	GTGAGAACTG	TCTGCACACA	CAGCAGAGTC	CACCAGTCAT	CCTAAGGAGA	9360
1982							
1983	TCAGTCCTGG	TGTTTATTGG	AGGACTGATG	TTGAAGCTGA	AACTCCAATG	CTTTGGCCAC	9420
1984							
1985	CTGATGTGAA	GAGCTGACTC	ATTTGAAAAG	ACCCTGATGC	TGGGAAAGAT	TGAGGGCAGG	9480
1986							
1987	AGGAGAAGGG	GACGACAGAG	GATGAGATGG	TTGGATGGCA	TCACCAACAC	AATGGACATG	9540
1988							
1989	GGTTTGGGTG	GACTCCAGGA	GTTGGTGATG	GACAGGGAGG	CCTGGCGTGC	TACGGAAGCG	9600

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1990								
1991	GTTTATGGGG	TCACAAAGAC	TGAGTGACTG	AACTGAGCTG	AACTGAATGG	AAATGAGGTA	9660	
1992								
1993	TACAGCAAAG	TGGGGATTTT	TTAGATAATA	AGAATATACA	CATAACATAG	TGTATACTCA	9720	
1994								
1995	TATTTTTTATG	CATACCTGAA	TGCTCAGTCA	CTCAGTCGTA	TCTGACTCTG	TGACCTATGG	9780	
1996								
1997	ACCGTAGCCT	TCCAGGTTTC	TTCTGTCCAC	AGAATTCTCC	AAGGCAAGAA	TACTGGAGTG	9840	
1998								
1999	GGTAGCCATT	TCCTCCTCCA	GGGGATCCTC	CCGACCCAGG	GATTGAACCG	GCATCTCCTG	9900	
2000								
2001	TATTGGCAGG	TGGATTCTTT	ACCACTGTGC	CACCAGGGAA	GCCCGTGTTA	CTCTCTATGT	9960	
2002								
2003	CCCACTTAAT	TACCAAAGCT	GCTCCAAGAA	AAAGCCCCTG	TGCCCTCTGA	GCTTCCCGGC	10020	
2004								
2005	CTGCAGAGGG	TGGTGGGGGT	AGACTGTGAC	CTGGGAACAC	CCTCCCGCTT	CAGGACTCCC	10080	
2006								
2007	GGGCCACGTG	ACCCACAGTC	CTGCAGACAG	CCGGGTAGCT	CTGCTCTTCA	AGGCTCATT	10140	
2008								
2009	TCTTTAAAAA	AAACTGAGGT	CTATTTTGTG	ACTTCGCTGC	CGTAACTTCT	GAACATCCAG	10200	
2010								
2011	TGCGATGGAC	AGGACCTCCT	CCCCAGGCCT	CAGGGGCTTC	AGGGAGCCAG	CCTTCACCTA	10260	
2012								
2013	TGAGTCACCA	GACACTCGGG	GGTGGCCCCG	CCTTCAGGGT	GCTCACAGTC	TTCCCATCGT	10320	
2014								
2015	CCTGATCAAA	GAGCAAGACC	AATGACTTCT	TAGGAGCAAG	CAGACACCCA	CAGGACACTG	10380	
2016								
2017	AGGTTACCA	GAGCTGAGCT	GTCCTTTTGA	ACCTAAAGAC	ACACAGCTCT	CGAAGGTTTT	10440	
2018								
2019	CTCTTTAATC	TGGATTTAAG	GCCTACTTGC	CCCTCAAGAG	GGAAGACAGT	CCTGCATGTC	10500	
2020								
2021								
2022	CCCAGGACAG	CCACTCGGTG	GCATCCGAGG	CCACTTAGTA	TTATCTGACC	GCACCCTGGA	10560	
2023								
2024	ATTAATCGGT	CCAAACTGGA	CAAAAACCTT	GGTGGGAAGT	TTCATCCCAG	AGGCCTCAAC	10620	
2025								
2026	CATCCTGCTT	TGACCACCCT	GCATCTTTTT	TTCTTTTATG	TGTATGCATG	TATATATATA	10680	
2027								
2028	TATATATTTT	TTTTTTTTTTC	ATTTTTTGGC	TGTGCTGGCT	GTTCGTTGCA	GTTTCGGTGCG	10740	
2029								
2030	CAGGCTTCTC	TCTAGTTTCT	CTCTAGTCTT	CTCTTATCAC	AGAGCAGTCT	CTAGACGATC	10800	
2031								
2032	GACGCGT						10807	
2033								

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 47 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

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2041
2042
2043
2044 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:
2045
2046 AATTCCGATC GACGCGTCGA CGATATACTC TAGACGATCG ACGCGTA 47
2047
2048 (2) INFORMATION FOR SEQ ID NO:9:
2049
2050 (i) SEQUENCE CHARACTERISTICS:
2051 (A) LENGTH: 24 base pairs
2052 (B) TYPE: nucleic acid
2053 (C) STRANDEDNESS: single
2054 (D) TOPOLOGY: linear
2055
2056
2057 (vii) IMMEDIATE SOURCE:
2058 (B) CLONE: BLGAMP3
2059
2060
2061 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:
2062
2063 TGGATCCCCT GCCGGTGCCT CTGG 24
2064
2065
2066 (2) INFORMATION FOR SEQ ID NO:10:
2067
2068 (i) SEQUENCE CHARACTERISTICS:
2069 (A) LENGTH: 24 base pairs
2070 (B) TYPE: nucleic acid
2071 (C) STRANDEDNESS: single
2072 (D) TOPOLOGY: linear
2073
2074
2075 (vii) IMMEDIATE SOURCE:
2076 (B) CLONE: BLGAMP4
2077
2078
2079 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:
2080
2081 AACGCGTCAT CCTCTGTGAG CCAG 24
2082
2083 (2) INFORMATION FOR SEQ ID NO:11:
2084
2085 (i) SEQUENCE CHARACTERISTICS:
2086 (A) LENGTH: 10 base pairs
2087 (B) TYPE: nucleic acid
2088 (C) STRANDEDNESS: single
2089 (D) TOPOLOGY: linear
2090
2091

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2092 (vii) IMMEDIATE SOURCE:
2093 (B) CLONE: ZC6839
2094
2095
2096 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:
2097
2098 ACTACGTAGT 10
2099
2100 (2) INFORMATION FOR SEQ ID NO:12:
2101
2102 (i) SEQUENCE CHARACTERISTICS:
2103 (A) LENGTH: 42 base pairs
2104 (B) TYPE: nucleic acid
2105 (C) STRANDEDNESS: single
2106 (D) TOPOLOGY: linear
2107
2108
2109 (vii) IMMEDIATE SOURCE:
2110 (B) CLONE: ZC6632
2111
2112
2113 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:
2114
2115 CGACGCGGAT CCTACGTACC TGCAGCCATG TTTTCCATGA GG 42
2116
2117 (2) INFORMATION FOR SEQ ID NO:13:
2118
2119 (i) SEQUENCE CHARACTERISTICS:
2120 (A) LENGTH: 21 base pairs
2121 (B) TYPE: nucleic acid
2122 (C) STRANDEDNESS: single
2123 (D) TOPOLOGY: linear
2124
2125
2126 (vii) IMMEDIATE SOURCE:
2127 (B) CLONE: ZC6627
2128
2129
2130 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:
2131
2132 AGGGCTTCGG CAAGCTTCAG G 21
2133
2134 (2) INFORMATION FOR SEQ ID NO:14:
2135
2136 (i) SEQUENCE CHARACTERISTICS:
2137 (A) LENGTH: 24 base pairs
2138 (B) TYPE: nucleic acid
2139 (C) STRANDEDNESS: single
2140 (D) TOPOLOGY: linear
2141
2142

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2143 (vii) IMMEDIATE SOURCE:
2144 (B) CLONE: ZC6521
2145
2146
2147 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:
2148
2149 GCCAAAGACT TACTTCCCTC TAGA 24
2150
2151
2152 (2) INFORMATION FOR SEQ ID NO:15:
2153
2154 (i) SEQUENCE CHARACTERISTICS:
2155 (A) LENGTH: 30 base pairs
2156 (B) TYPE: nucleic acid
2157 (C) STRANDEDNESS: single
2158 (D) TOPOLOGY: linear
2159
2160
2161 (vii) IMMEDIATE SOURCE:
2162 (B) CLONE: ZC6520
2163
2164
2165 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:
2166
2167 GCATGAACGT CGCGTGGTGG TTGTGCTACC 30
2168
2169 (2) INFORMATION FOR SEQ ID NO:16:
2170
2171 (i) SEQUENCE CHARACTERISTICS:
2172 (A) LENGTH: 30 base pairs
2173 (B) TYPE: nucleic acid
2174 (C) STRANDEDNESS: single
2175 (D) TOPOLOGY: linear
2176
2177
2178 (vii) IMMEDIATE SOURCE:
2179 (B) CLONE: ZC6519
2180
2181
2182 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:
2183
2184 ACCACGCGAC GTTCATGCTC TAAACCGTT 30
2185
2186 (2) INFORMATION FOR SEQ ID NO:17:
2187
2188 (i) SEQUENCE CHARACTERISTICS:
2189 (A) LENGTH: 36 base pairs
2190 (B) TYPE: nucleic acid
2191 (C) STRANDEDNESS: single
2192 (D) TOPOLOGY: linear
2193

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2194
2195 (vii) IMMEDIATE SOURCE:
2196 (B) CLONE: ZC6518
2197
2198
2199 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:
2200
2201 GCTGCGGGAT CCTACGTACT AGGGGGACAG GGAAGG 36
2202
2203 (2) INFORMATION FOR SEQ ID NO:18:
2204
2205 (i) SEQUENCE CHARACTERISTICS:
2206 (A) LENGTH: 45 base pairs
2207 (B) TYPE: nucleic acid
2208 (C) STRANDEDNESS: single
2209 (D) TOPOLOGY: linear
2210
2211
2212 (vii) IMMEDIATE SOURCE:
2213 (B) CLONE: ZC6629
2214
2215
2216 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:
2217
2218 CGACGCGAAT TCTACGTACC TGCAGCCATG AAAAGGATGG TTTCT 45
2219
2220 (2) INFORMATION FOR SEQ ID NO:19:
2221
2222 (i) SEQUENCE CHARACTERISTICS:
2223 (A) LENGTH: 45 base pairs
2224 (B) TYPE: nucleic acid
2225 (C) STRANDEDNESS: single
2226 (D) TOPOLOGY: linear
2227
2228
2229 (vii) IMMEDIATE SOURCE:
2230 (B) CLONE: ZC6630
2231
2232
2233 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:
2234
2235 CGACGCGAAT TCTACGTACC TGCAGCCATG AAACATCTAT TATTG 45
2236
2237
2238 (2) INFORMATION FOR SEQ ID NO:20:
2239
2240 (i) SEQUENCE CHARACTERISTICS:
2241 (A) LENGTH: 21 base pairs
2242 (B) TYPE: nucleic acid
2243 (C) STRANDEDNESS: single
2244 (D) TOPOLOGY: linear

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/206,176DATE: 03/23/94
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2245
2246
2247 (vii) IMMEDIATE SOURCE:
2248 (B) CLONE: ZC6625
2249
2250
2251 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:
2252
2253 GTGAGATTTT CAGATCTTGT C 21
2254
2255 (2) INFORMATION FOR SEQ ID NO:21:
2256
2257 (i) SEQUENCE CHARACTERISTICS:
2258 (A) LENGTH: 21 base pairs
2259 (B) TYPE: nucleic acid
2260 (C) STRANDEDNESS: single
2261 (D) TOPOLOGY: linear
2262
2263
2264 (vii) IMMEDIATE SOURCE:
2265 (B) CLONE: ZC6626
2266
2267
2268 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:
2269
2270 AAGAATTACT GTGGCCTACC A 21
2271
2272 (2) INFORMATION FOR SEQ ID NO:22:
2273
2274 (i) SEQUENCE CHARACTERISTICS:
2275 (A) LENGTH: 33 base pairs
2276 (B) TYPE: nucleic acid
2277 (C) STRANDEDNESS: single
2278 (D) TOPOLOGY: linear
2279
2280
2281
2282 (vii) IMMEDIATE SOURCE:
2283 (B) CLONE: ZC6624
2284
2285
2286 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:
2287
2288 GCTGCGGAAT TCTACGTACT ATTGCTGTGG GAA 33
2289
2290 (2) INFORMATION FOR SEQ ID NO:23:
2291
2292 (i) SEQUENCE CHARACTERISTICS:
2293 (A) LENGTH: 45 base pairs
2294 (B) TYPE: nucleic acid
2295 (C) STRANDEDNESS: single

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2296 (D) TOPOLOGY: linear

2297

2298

2299 (vii) IMMEDIATE SOURCE:

2300 (B) CLONE: ZC6514

2301

2302

2303 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

2304

2305 CGACGCGGAT CCTACGTACC TGCAGCCATG AGTTGGTCCT TGCAC

45

2306

2307 (2) INFORMATION FOR SEQ ID NO:24:

2308

2309 (i) SEQUENCE CHARACTERISTICS:

2310 (A) LENGTH: 21 base pairs

2311 (B) TYPE: nucleic acid

2312 (C) STRANDEDNESS: single

2313 (D) TOPOLOGY: linear

2314

2315

2316 (vii) IMMEDIATE SOURCE:

2317 (B) CLONE: zc6517

2318

2319

2320 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

2321

2322 GTCTCTGGTA GCAACATACT A

21

2323

2324

2325 (2) INFORMATION FOR SEQ ID NO:25:

2326

2327 (i) SEQUENCE CHARACTERISTICS:

2328 (A) LENGTH: 22 base pairs

2329 (B) TYPE: nucleic acid

2330 (C) STRANDEDNESS: single

2331 (D) TOPOLOGY: linear

2332

2333

2334 (vii) IMMEDIATE SOURCE:

2335 (B) CLONE: zc6516

2336

2337

2338 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

2339

2340 GGGTTTCTAG CCCTACTAGT AG

22

2341

2342 (2) INFORMATION FOR SEQ ID NO:26:

2343

2344 (i) SEQUENCE CHARACTERISTICS:

2345 (A) LENGTH: 22 base pairs

2346 (B) TYPE: nucleic acid

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/206,176DATE: 03/23/94
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2347 (C) STRANDEDNESS: single

2348 (D) TOPOLOGY: linear

2349

2350

2351 (vii) IMMEDIATE SOURCE:

2352 (B) CLONE: zc6515

2353

2354

2355 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

2356

2357 GGGTTTCTAG CCCTACTAGT AG

22

2358

2359

2360 (2) INFORMATION FOR SEQ ID NO:27:

2361

2362 (i) SEQUENCE CHARACTERISTICS:

2363 (A) LENGTH: 47 base pairs

2364 (B) TYPE: nucleic acid

2365 (C) STRANDEDNESS: single

2366 (D) TOPOLOGY: linear

2367

2368

2369

2370 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

2371

2372 AAGCTACGCG TCGATCGTCT AGAGTATATC GTCGACGCGT CGATCGG

47

2373

2374

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SEQUENCE VERIFICATION REPORT
PATENT APPLICATION US/08/206,176

DATE: 03/23/94
TIME: 15:05:24

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PATENT APPLICATION US/08/206,176

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TIME: 15:05:24

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APPLICATION NUMBER
FILING DATE
PRIOR APPLICATION DATA

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SEQUENCE CORRECTION REPORT
PATENT APPLICATION US/08/206,176

DATE: 03/23/94
TIME: 15:05:25

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